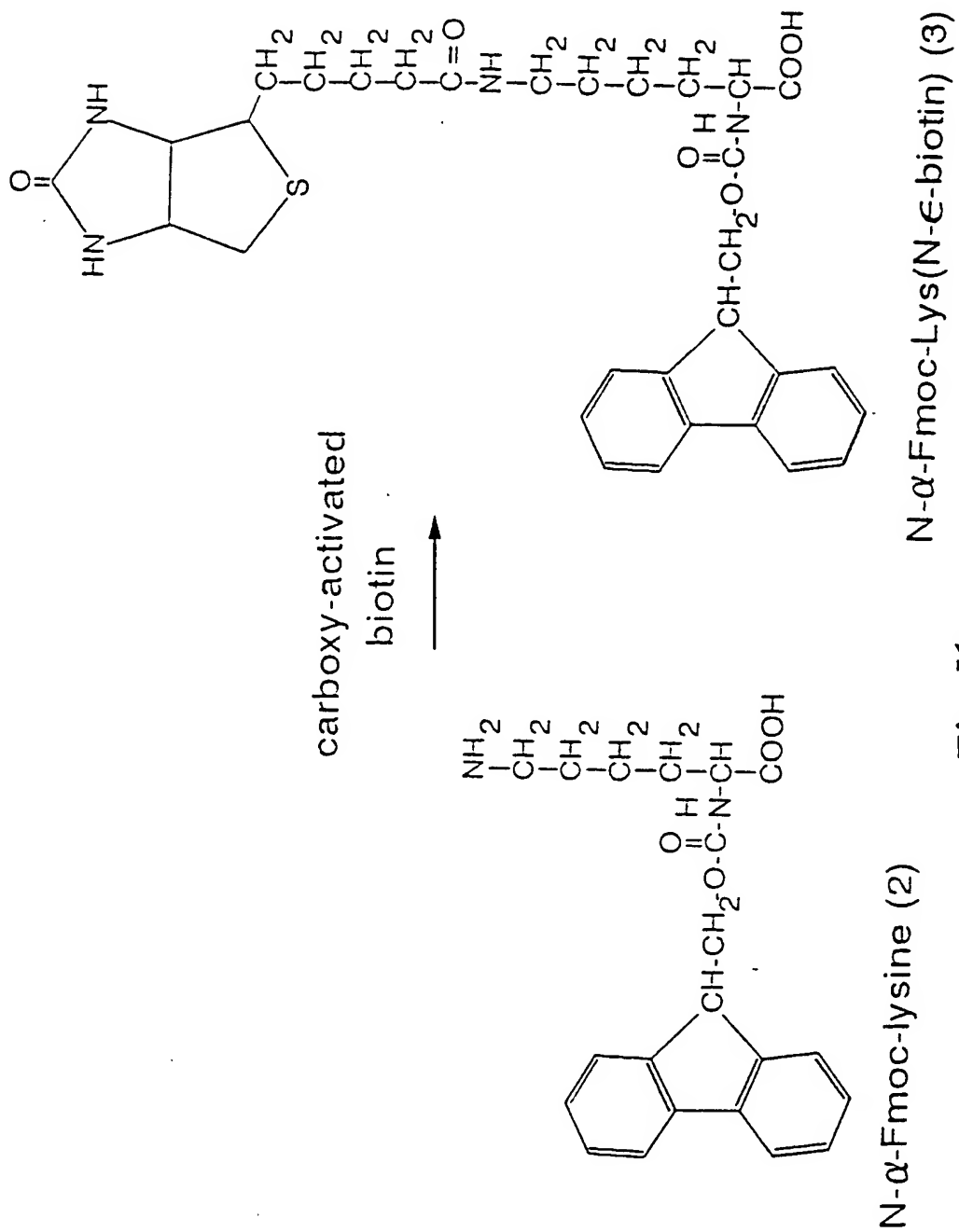


N-α-Fmoc-lysine (2)

N-α-Fmoc-Lys(N-ε-tBoc) (1)

*Fig. 1a*

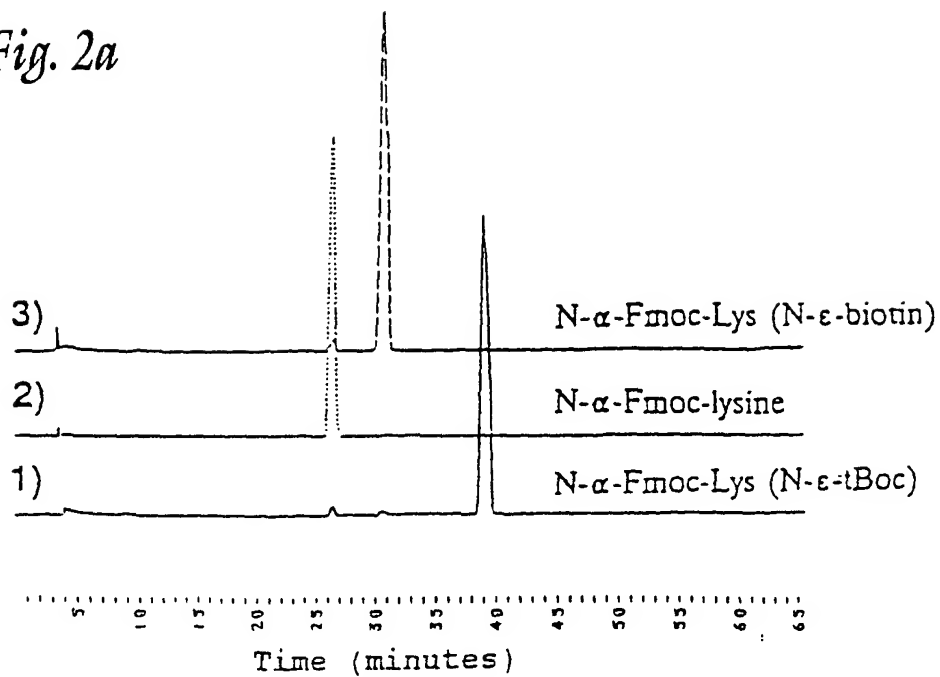


*Fig. 1b*

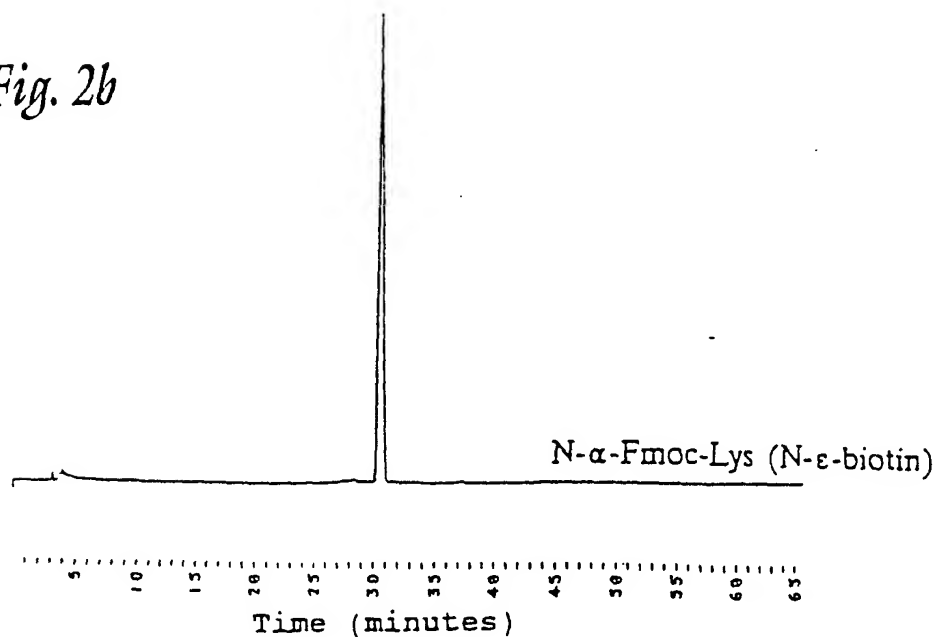


*Fig. 1c*

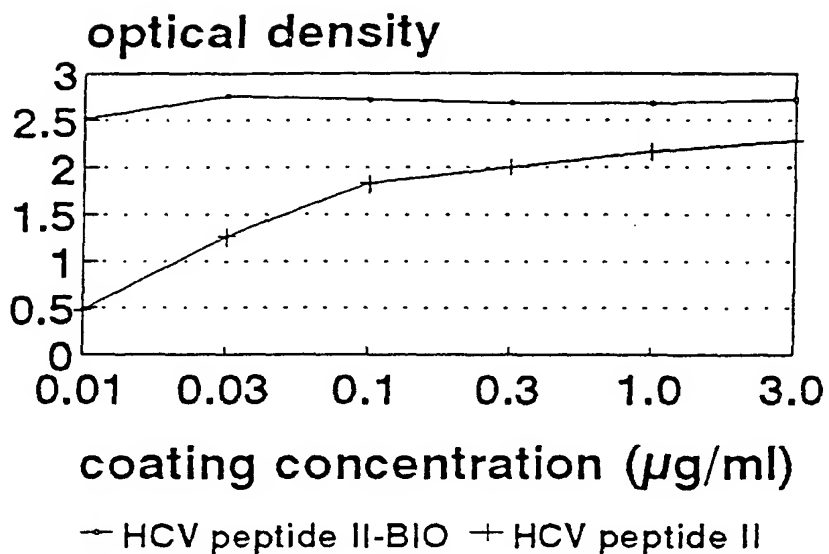
*Fig. 2a*



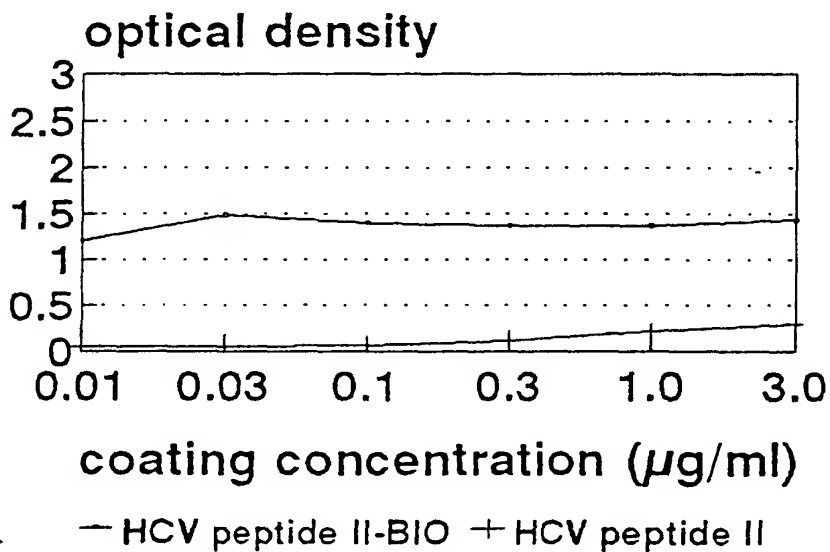
*Fig. 2b*



### sample 8320

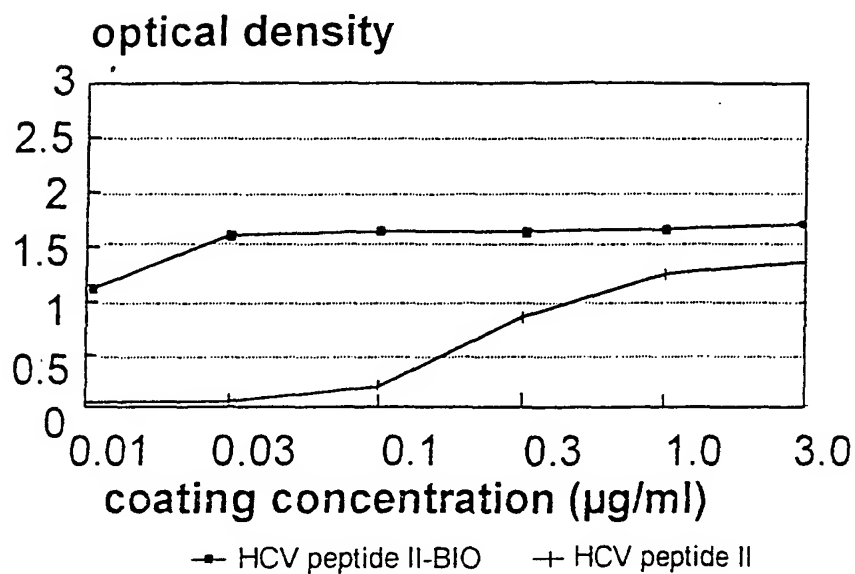


### sample 8242

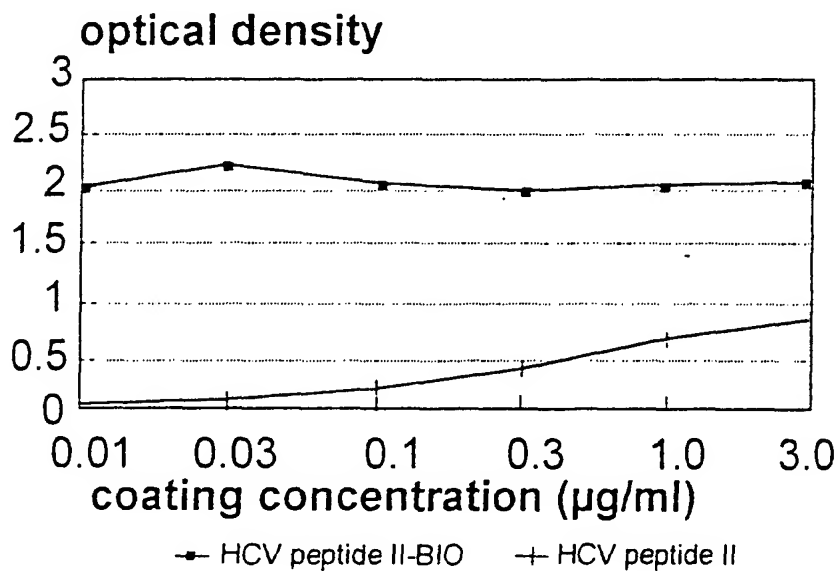


*Fig. 3a-1*

### sample 8243

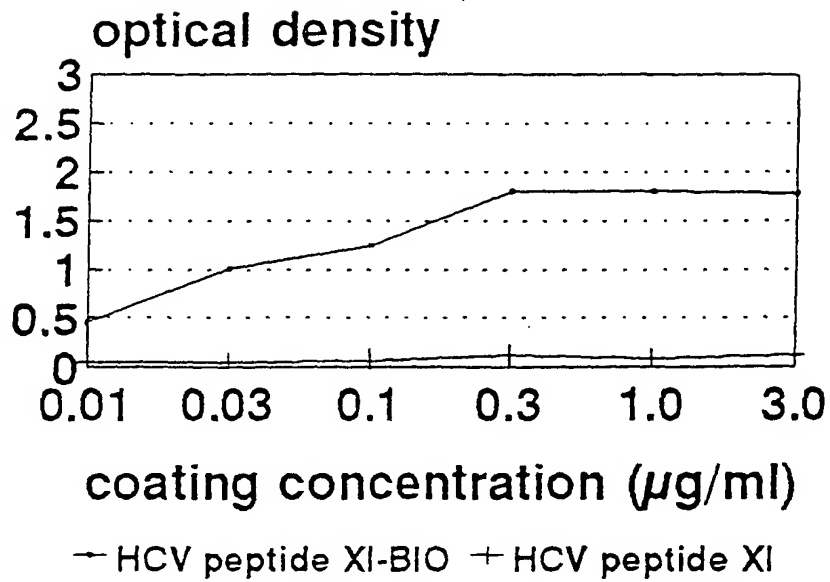


### sample 8318

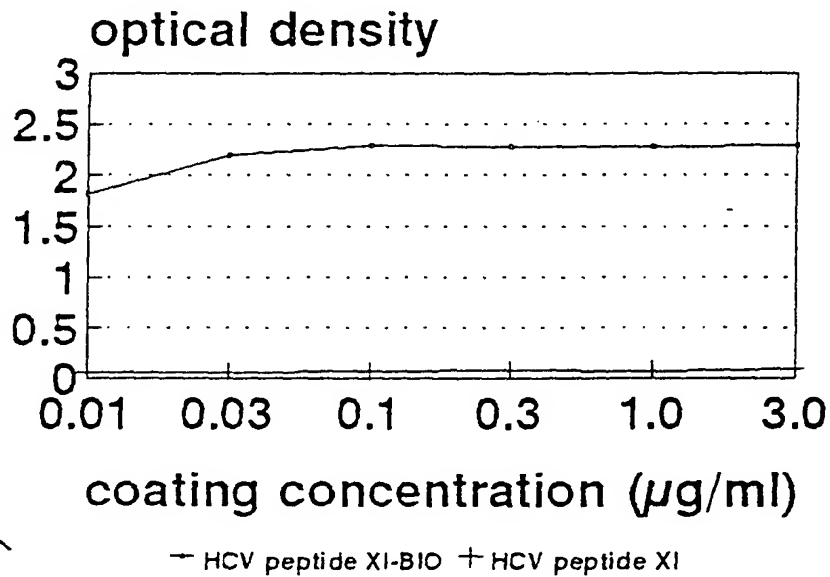


*Fig. 3a-2*

### sample 8320

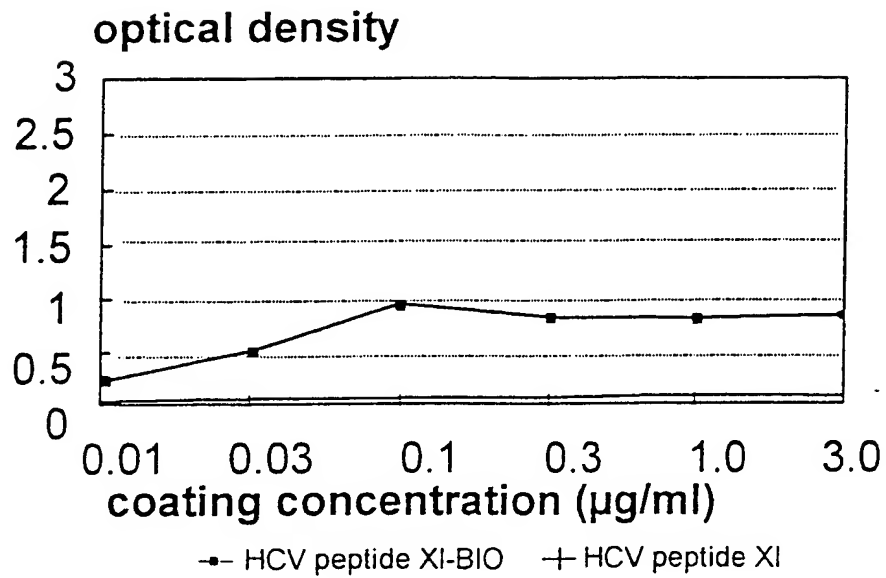


### sample 8326

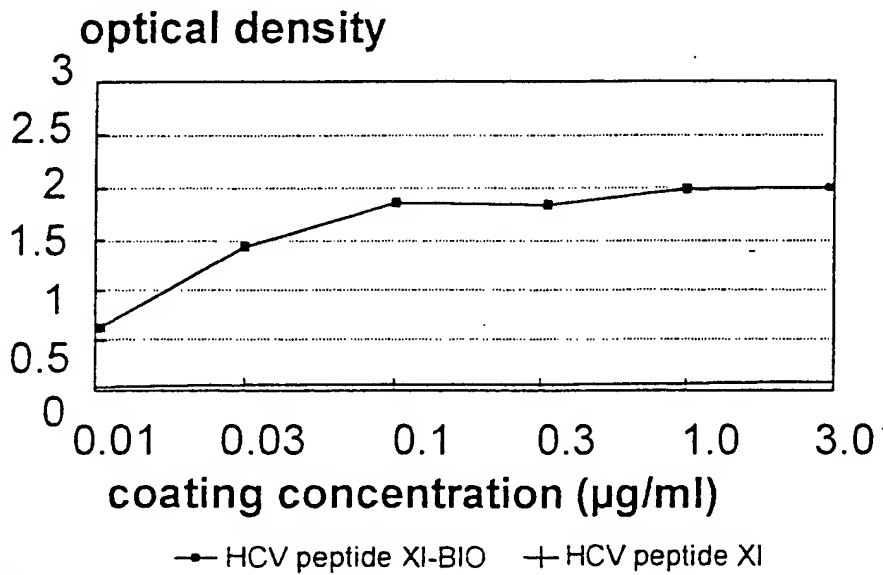


*Fig. 3b-1*

### sample 8242

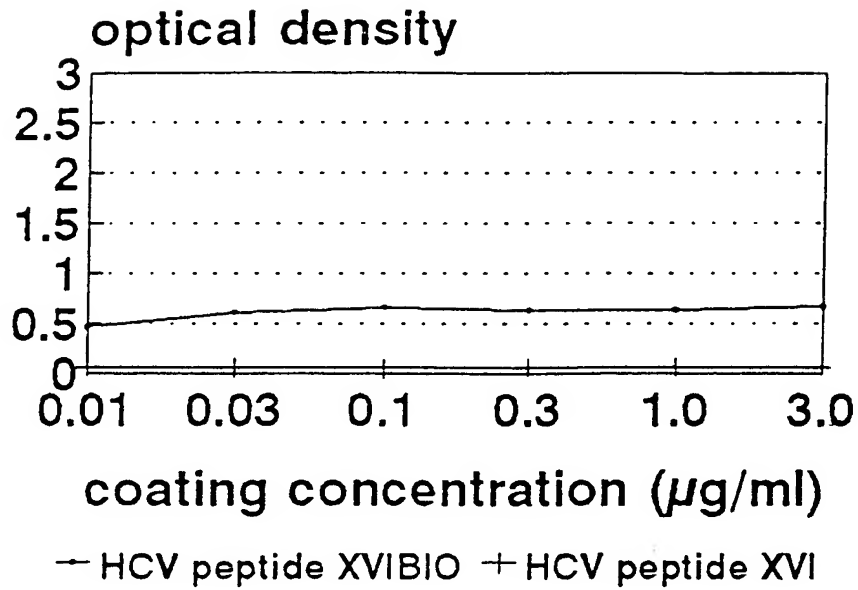


### sample 8243

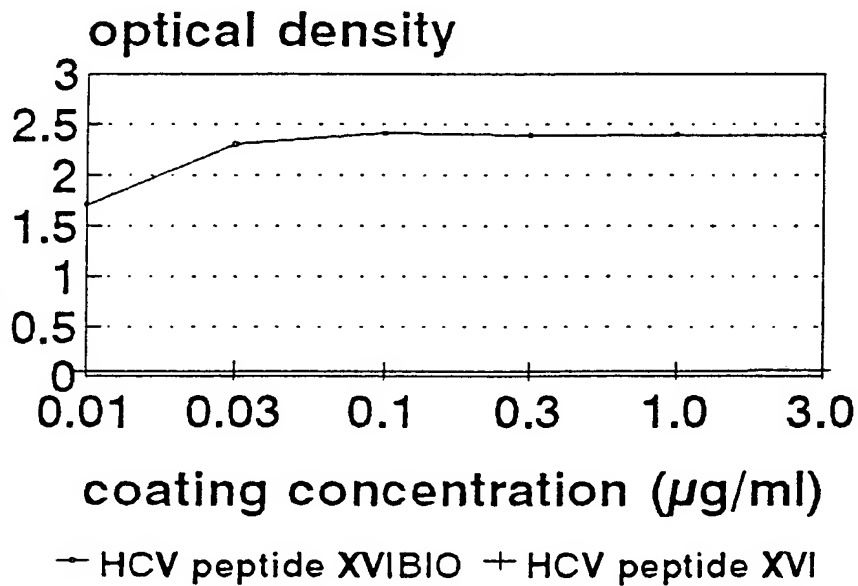


*Fig. 3b-2*

### sample 8243

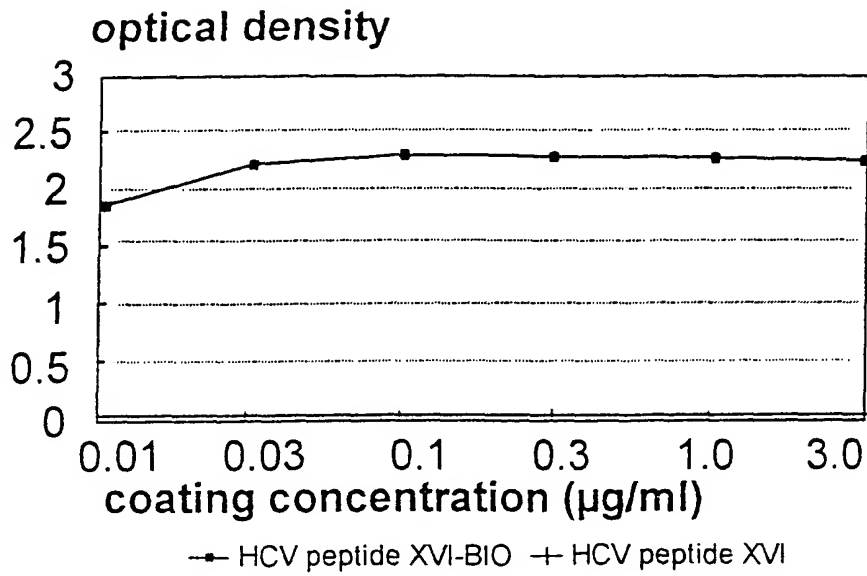


### sample 8318

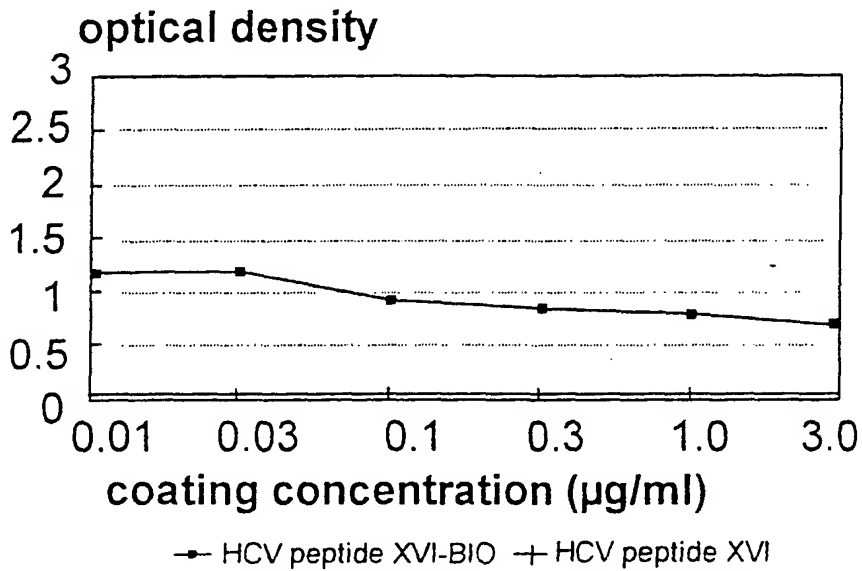


*Fig. 3c-1*

**sample 8326**

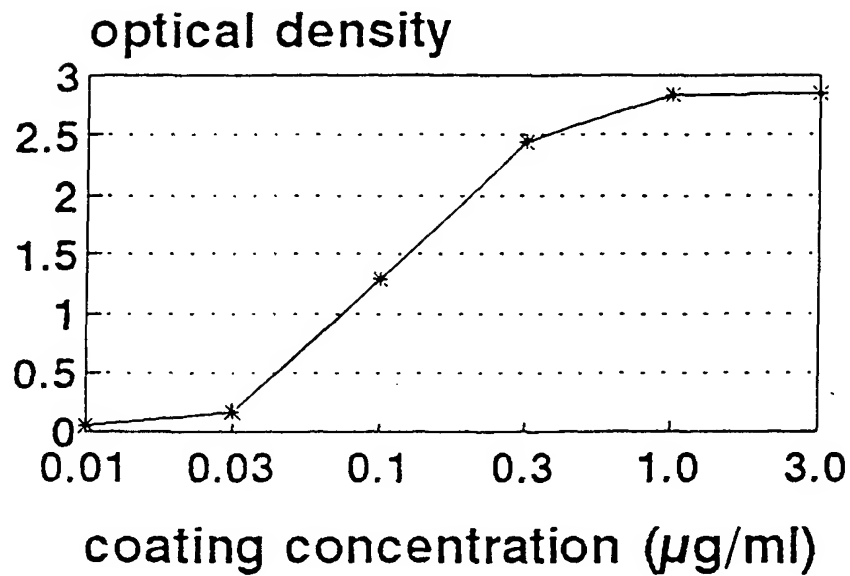


**sample 8242**

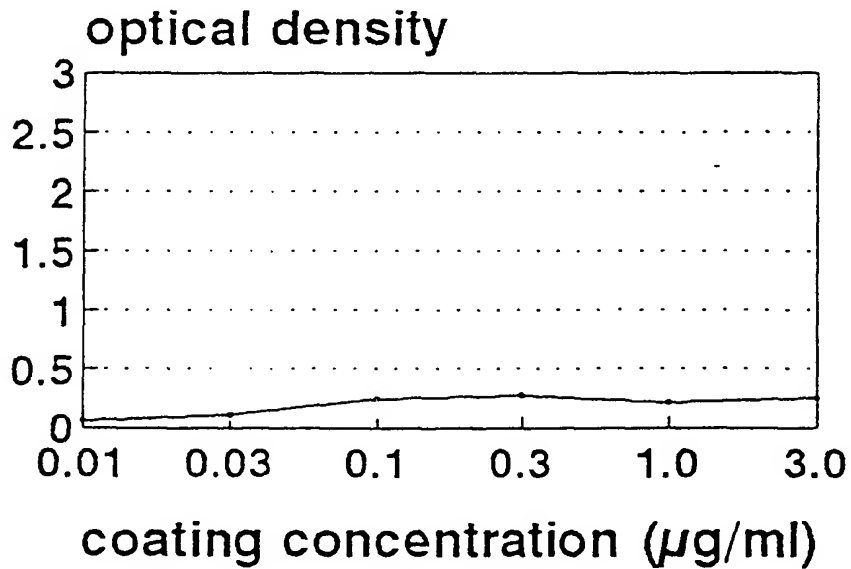


*Fig. 3c-2*

## HCV peptide II-BIO

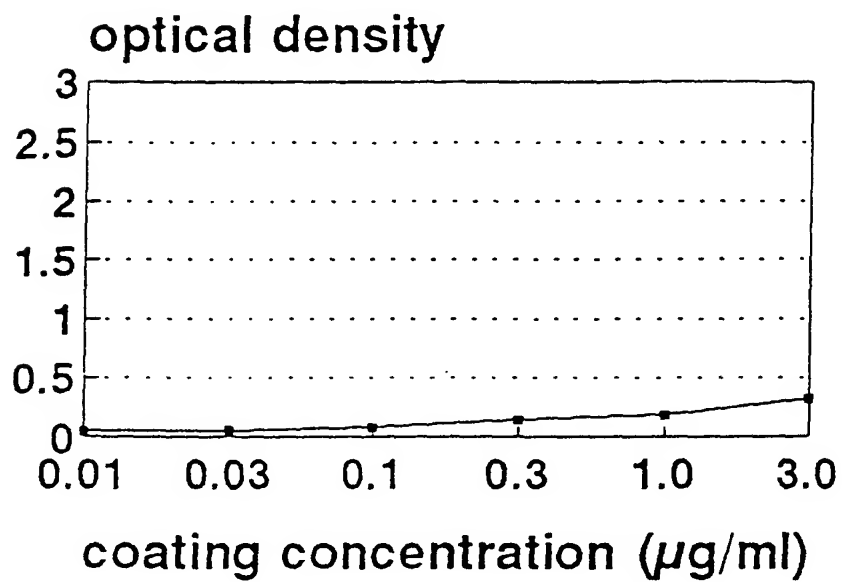


## HCV peptide XI-BIO



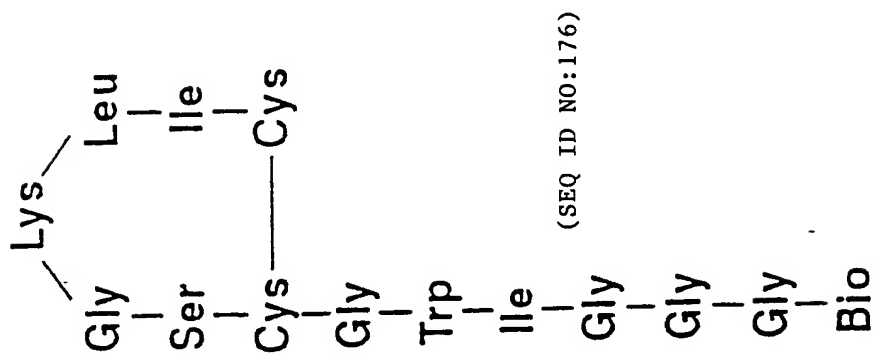
*Fig. 4a*

## HCV peptide XVI-BIO



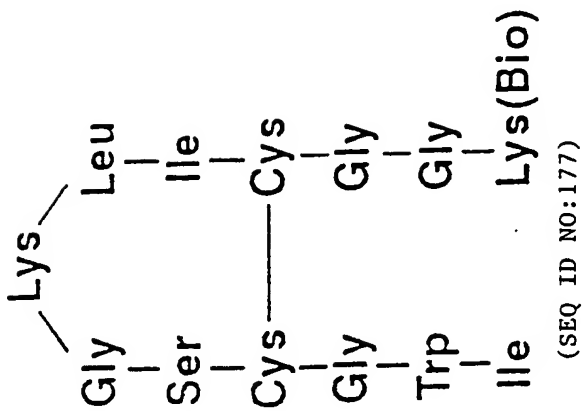
*Fig. 4b*

Fig. 5a



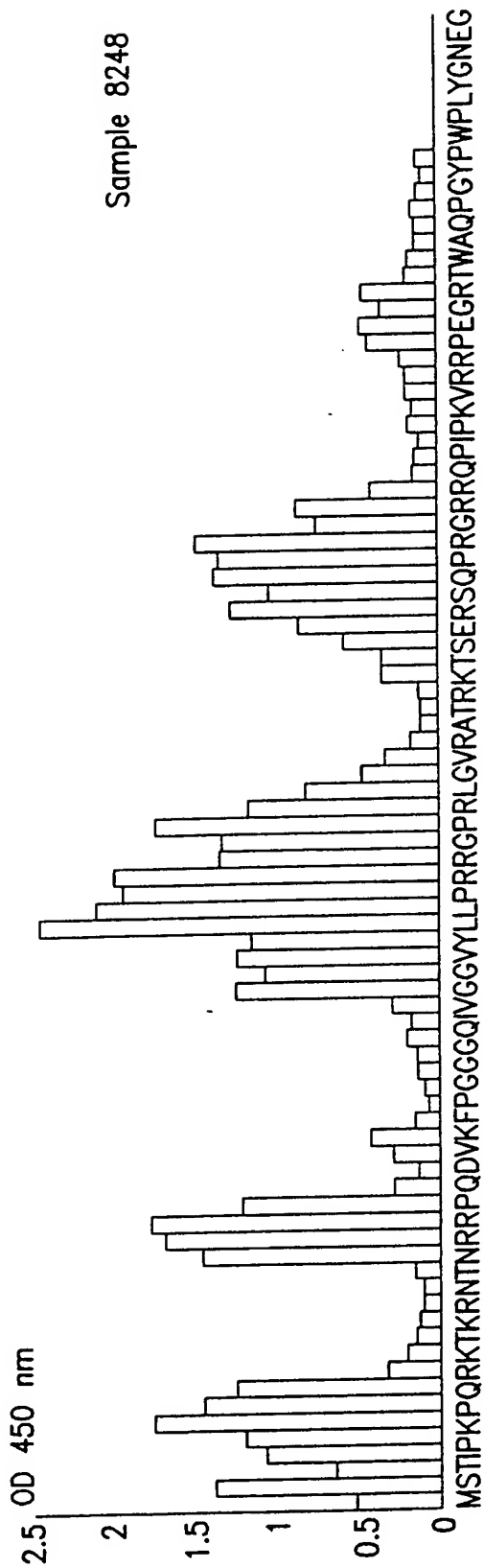
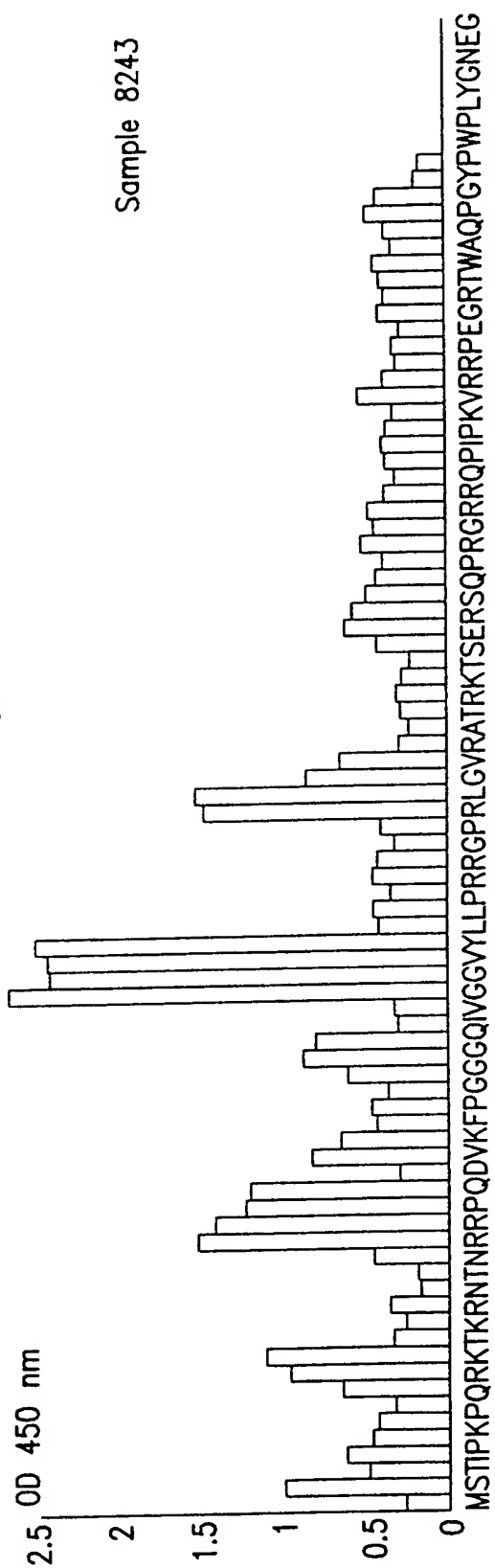
N-terminally biotinylated  
 TM peptide

Fig. 5b



C-terminally biotinylated  
 TM peptide

*Fig. 6a-1*



*Fig. 6a-2*

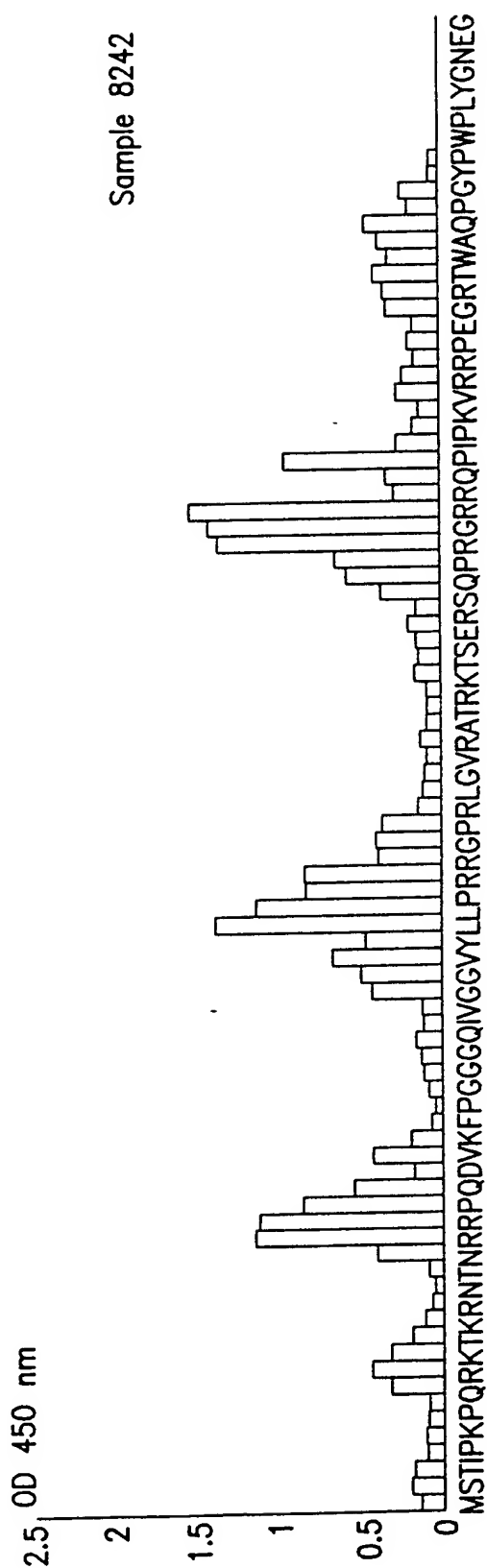
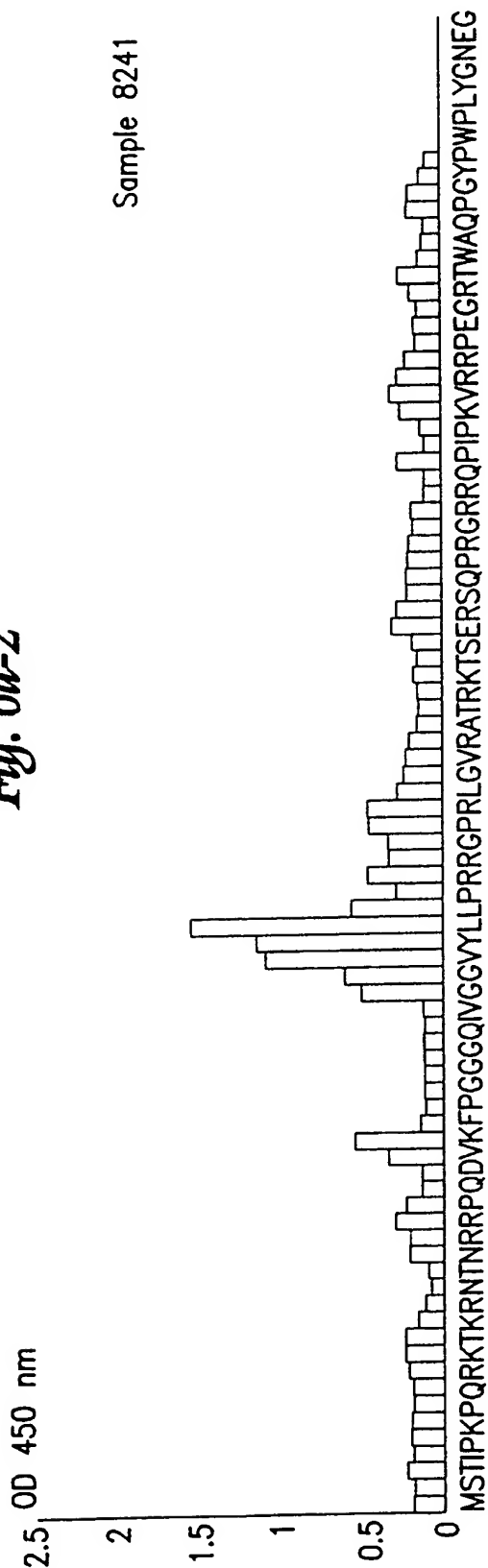


Fig. 6a-3

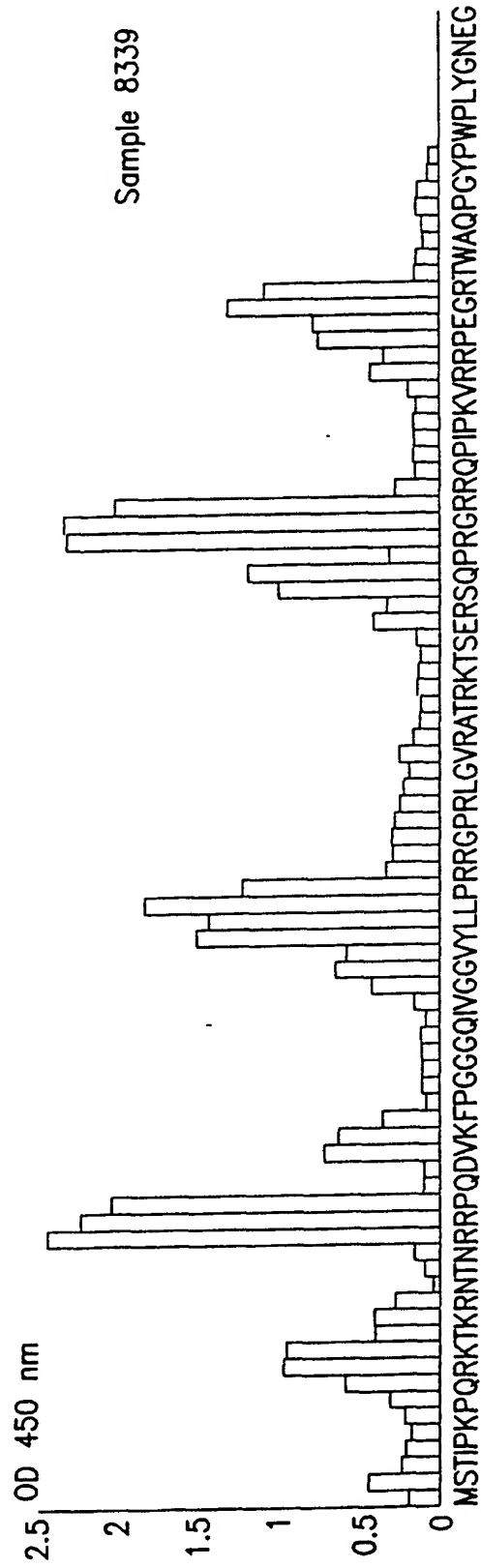
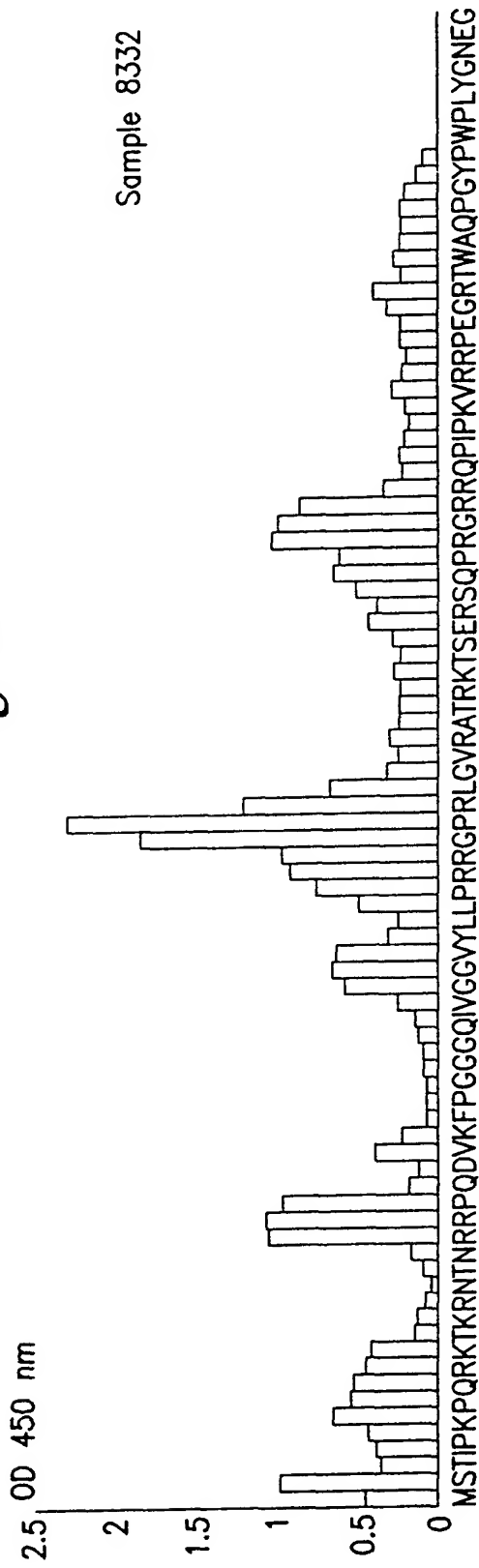


Fig. 6a-4

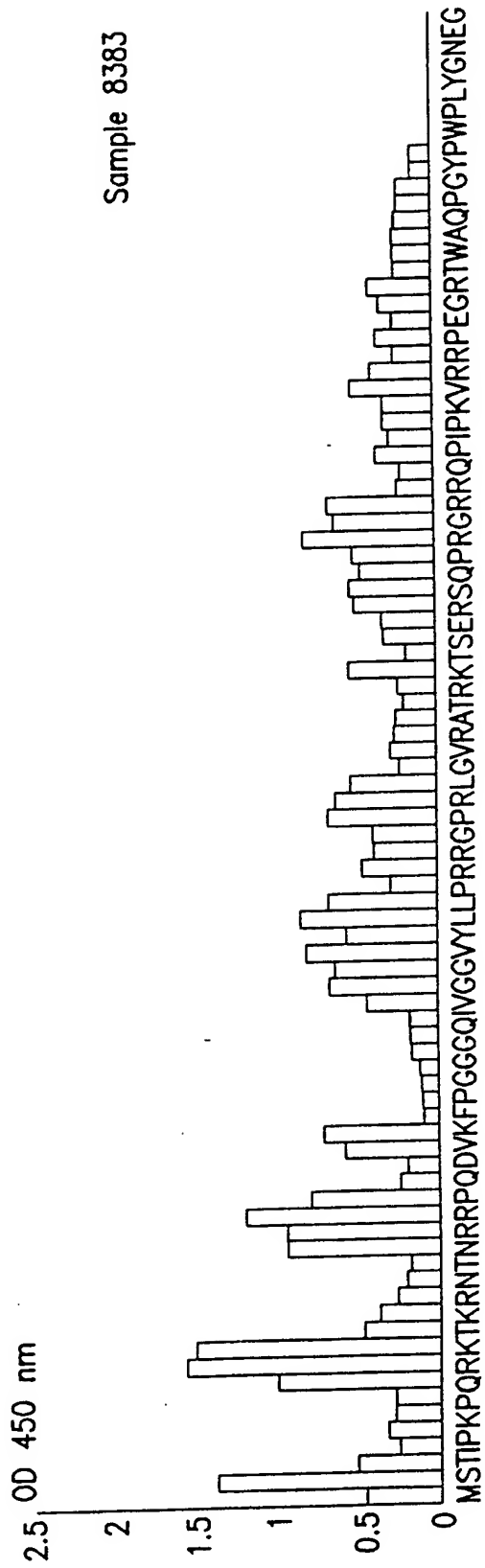
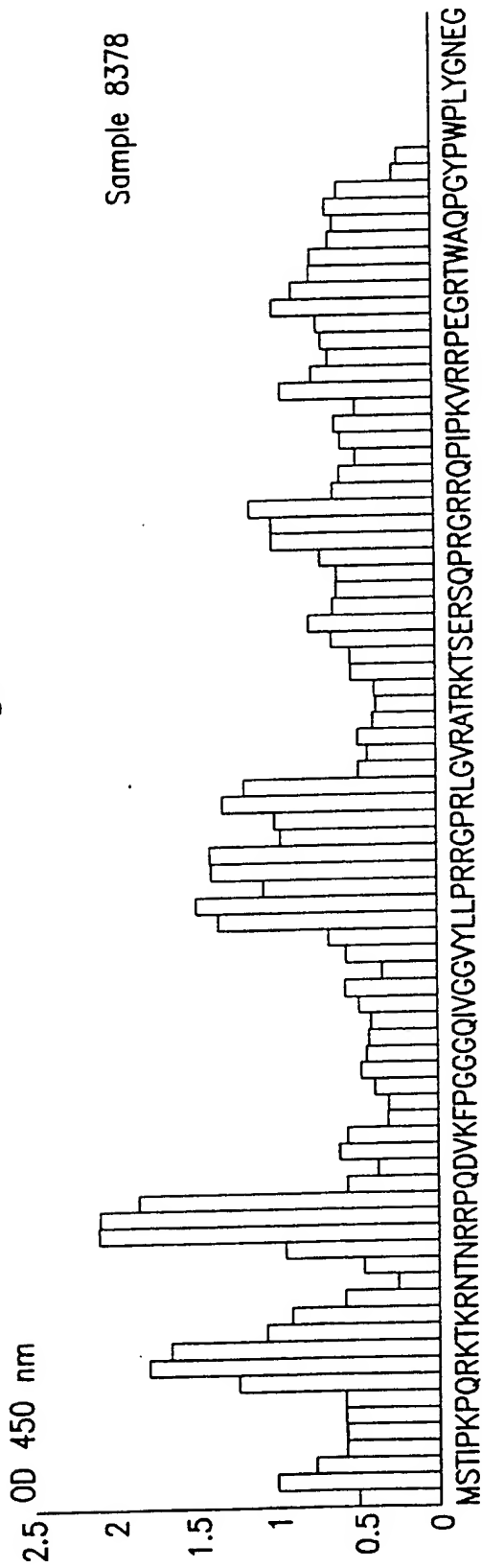
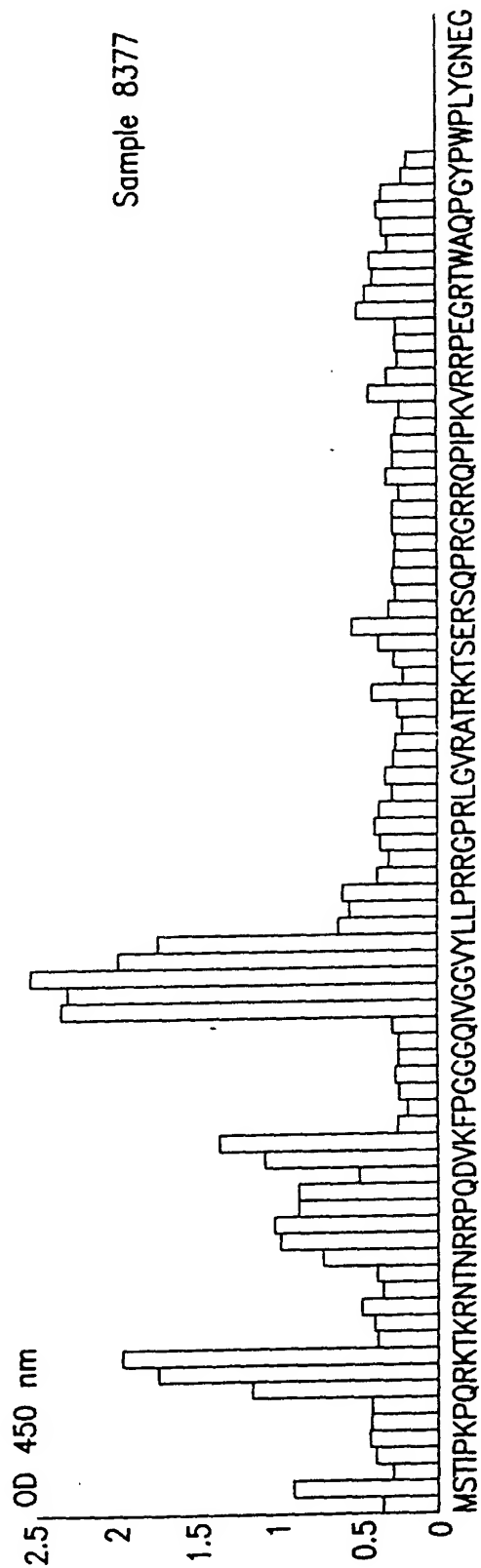
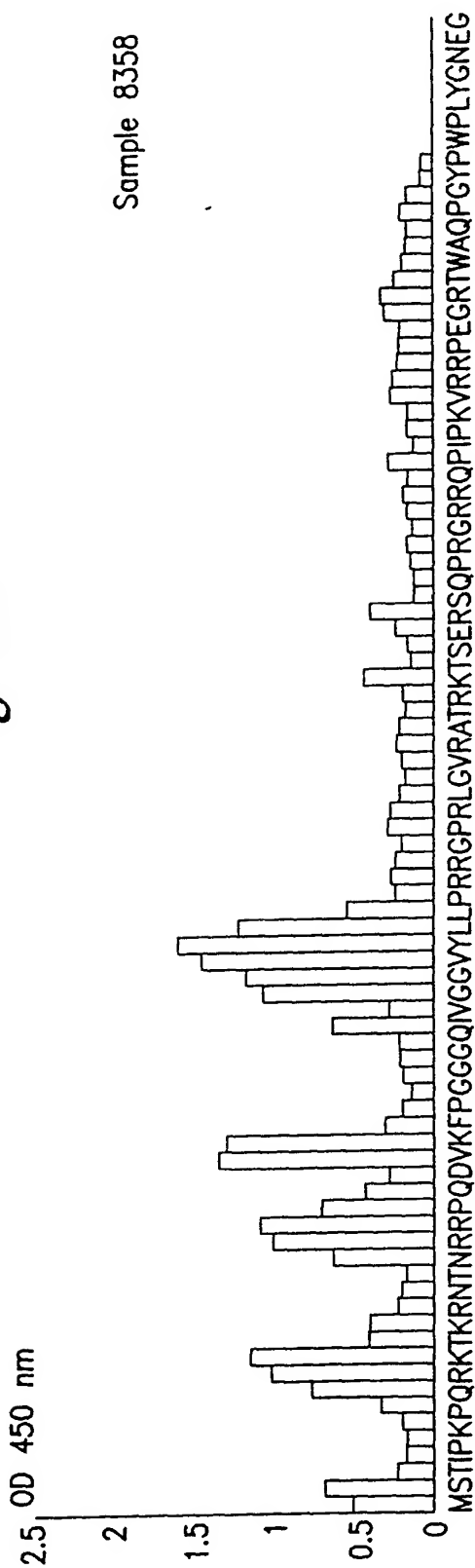


Fig. 6a-5



*Fig. 6b-1*

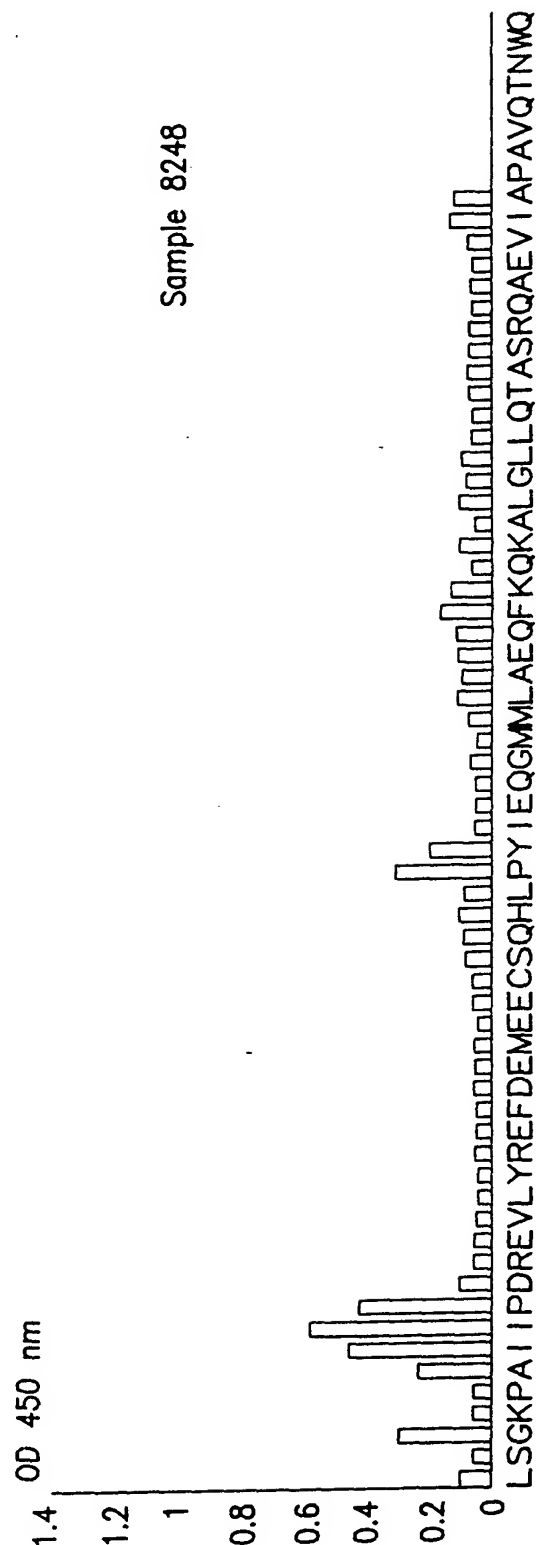
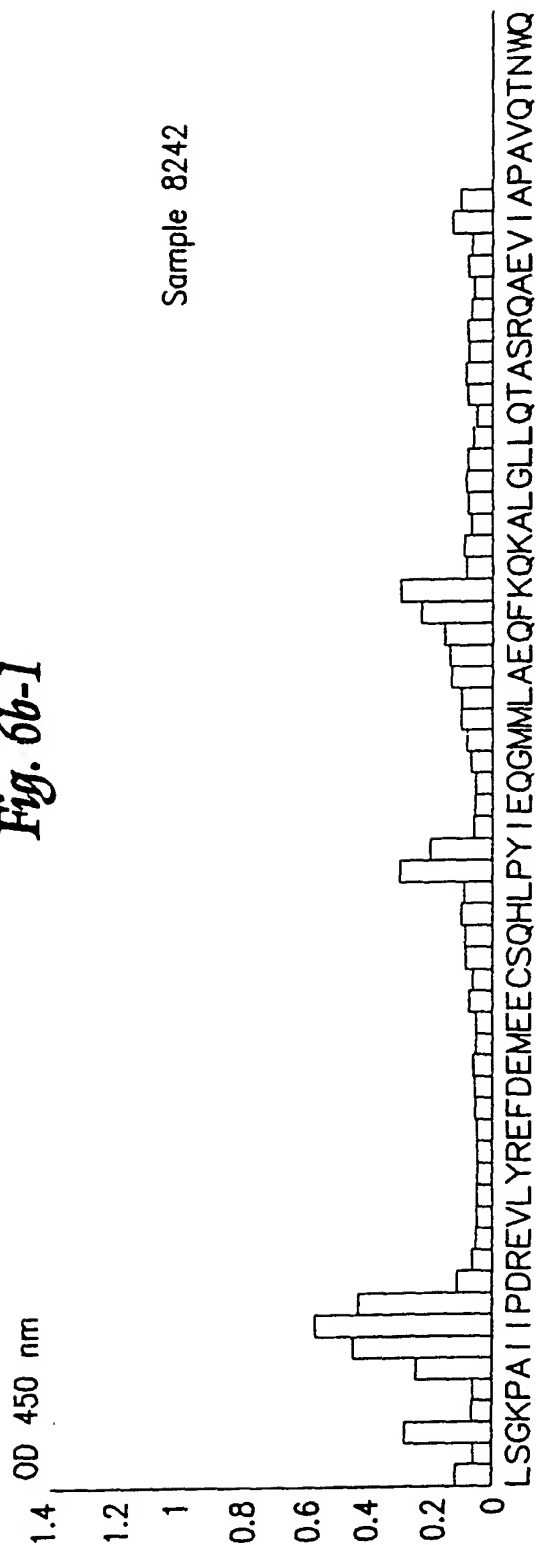


Fig. 6b-2

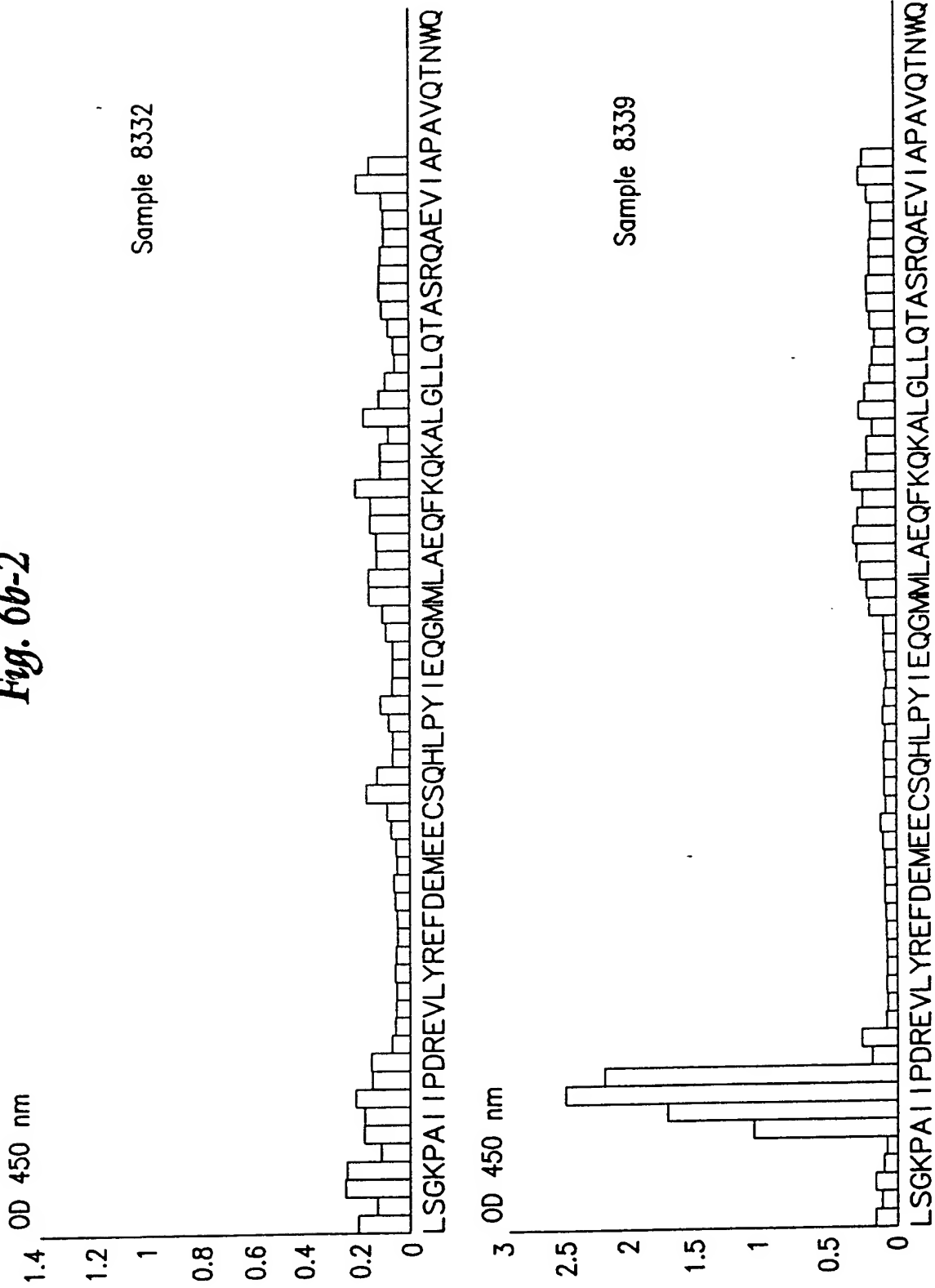


Fig. 6b-3

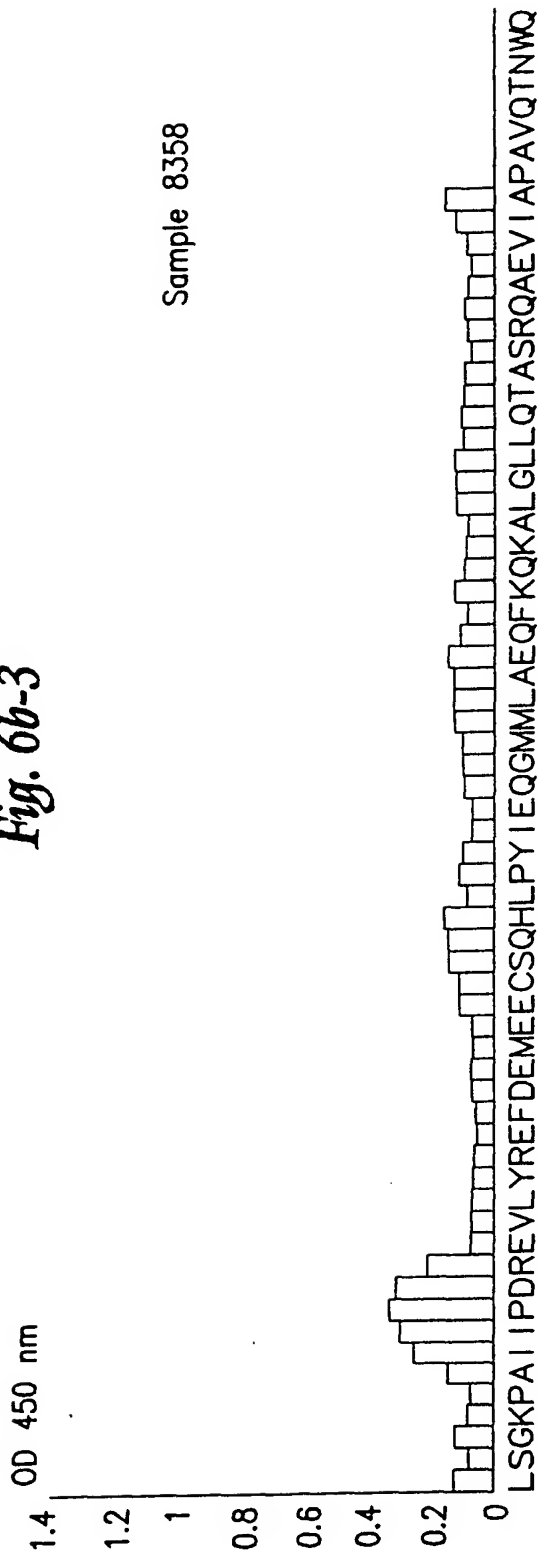


Fig. 6b-4

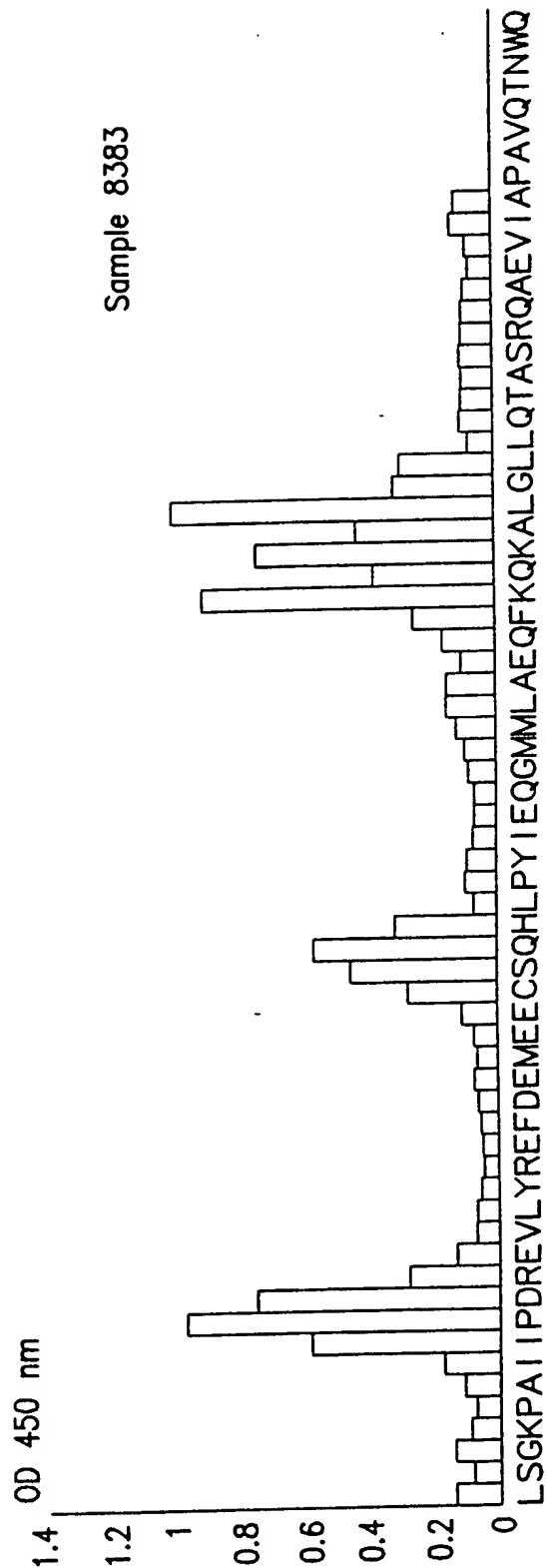
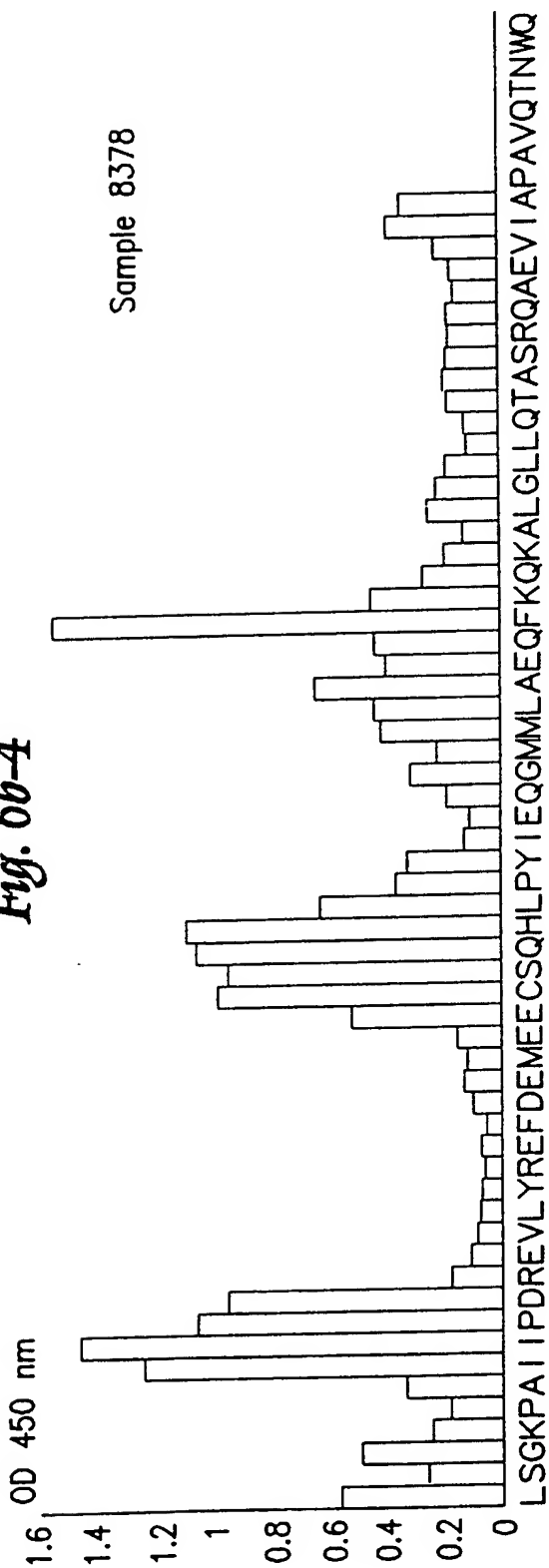


Fig. 6b-5

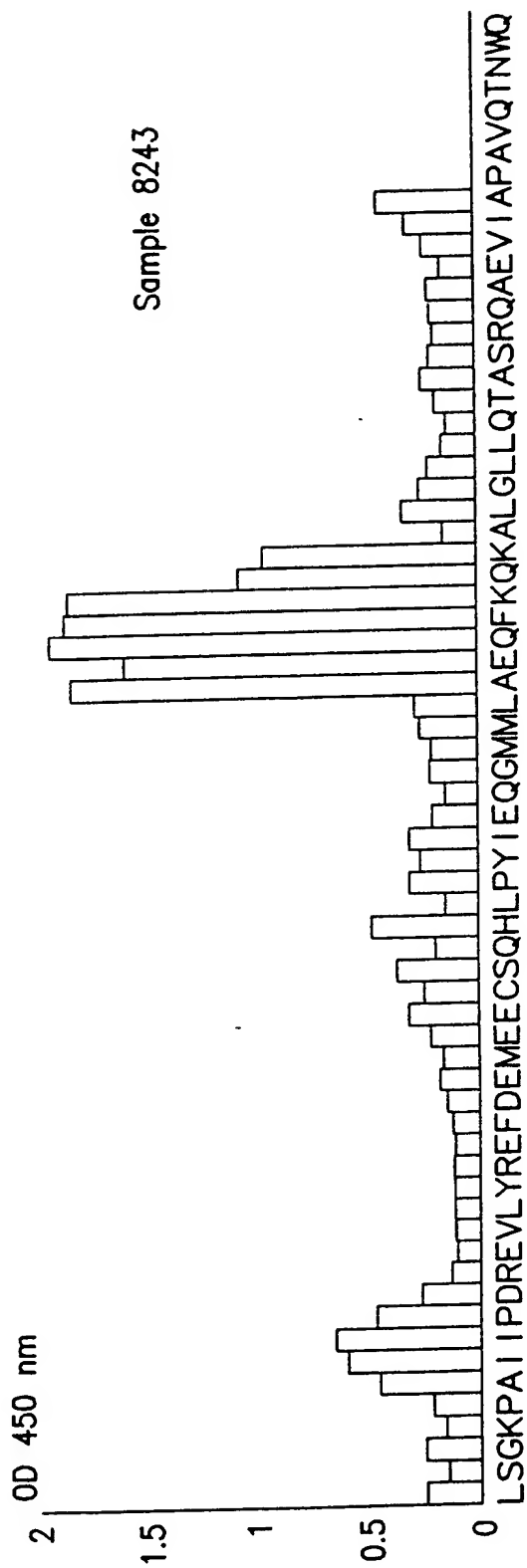
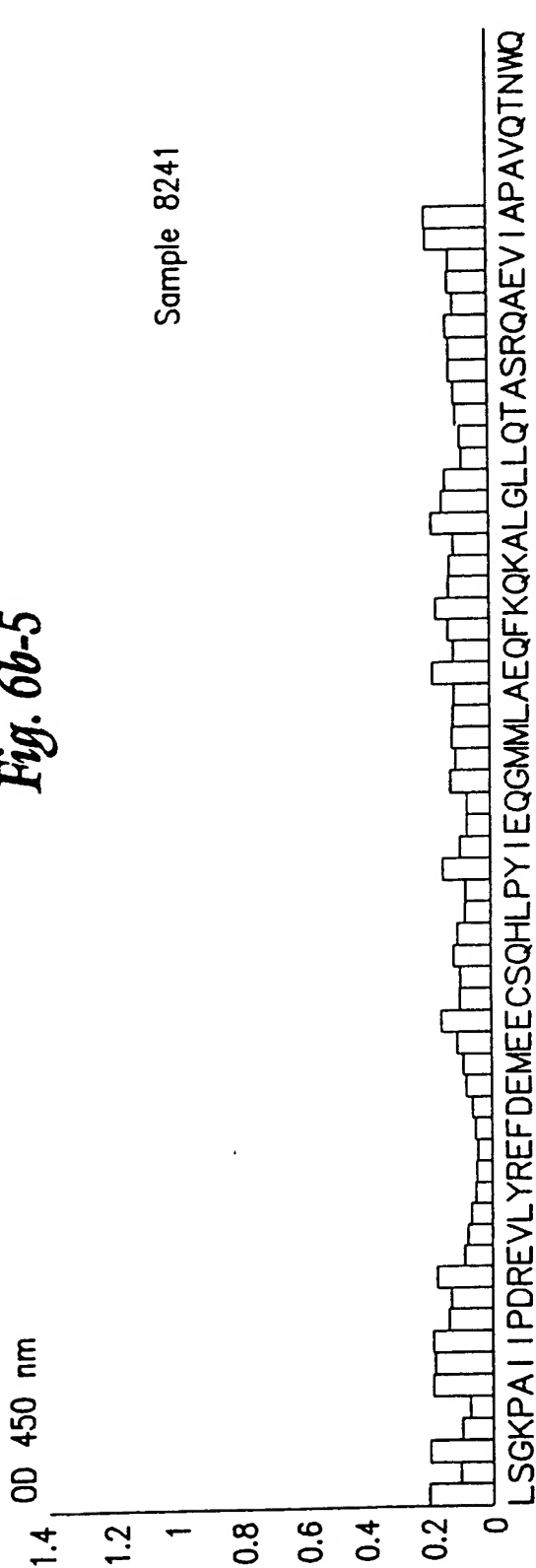
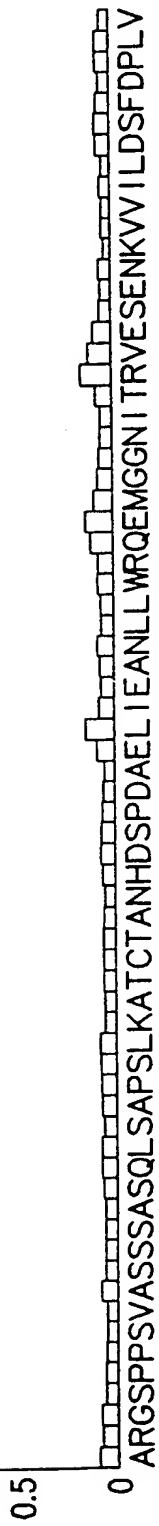


Fig. 6c-1

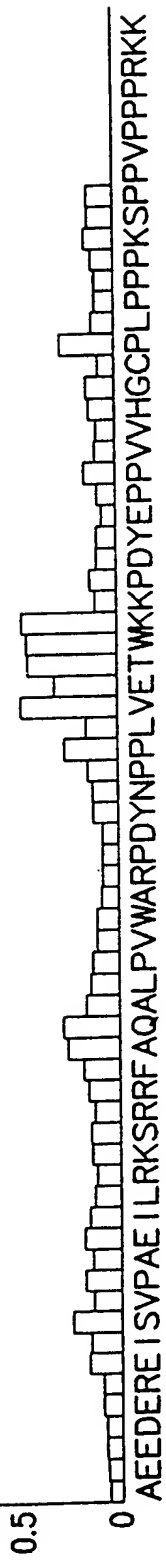
OD 450 nm

Sample 8242



OD 450 nm

Sample 8242 (continued)



2.5, OD 450 nm

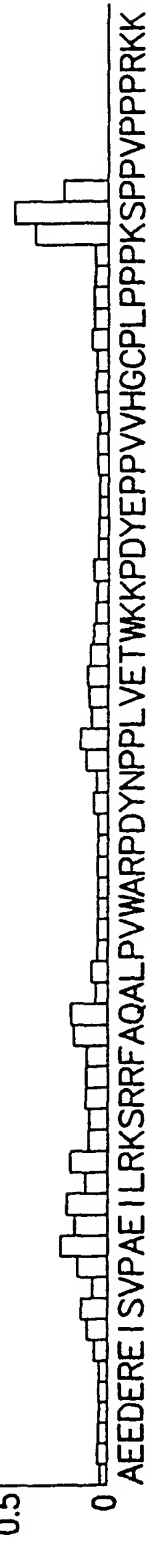
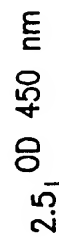
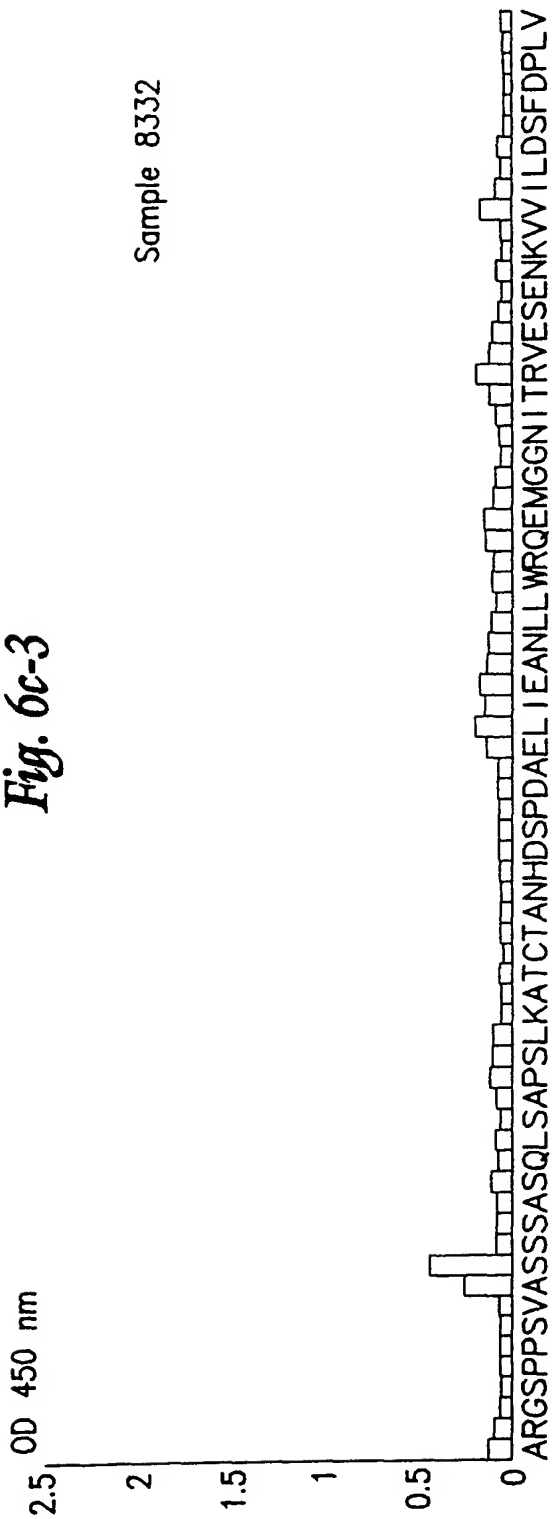


Fig. 6c-3

Sample 8332



Sample 8332 (continued)

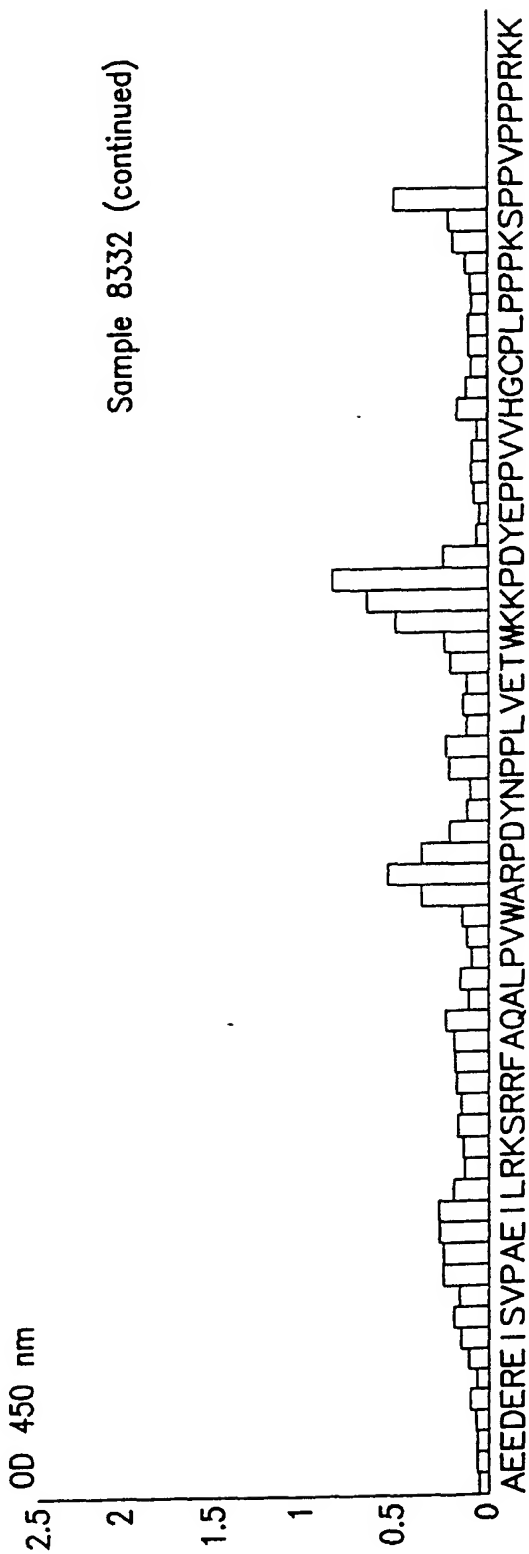


Fig. 6c-4

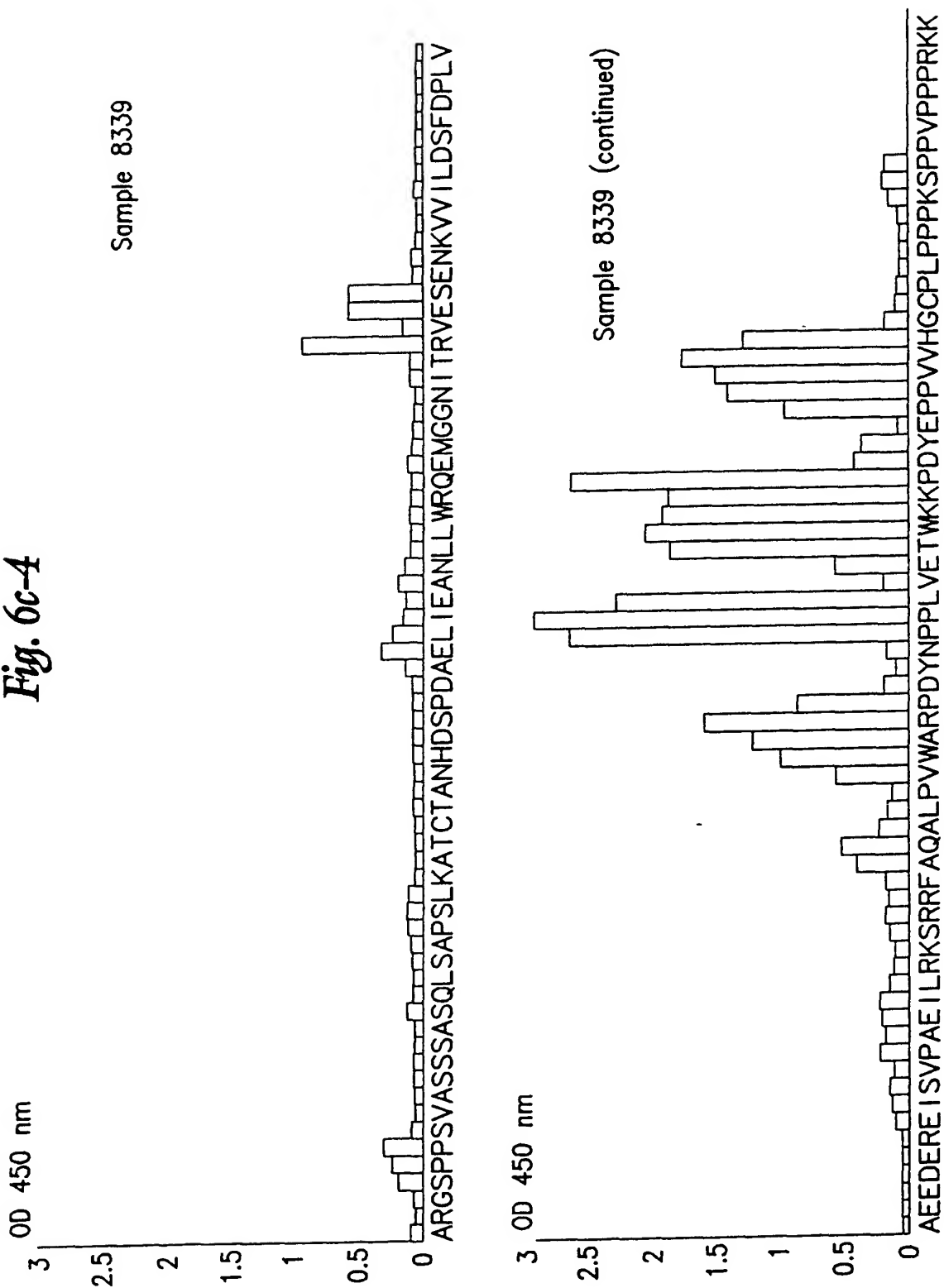
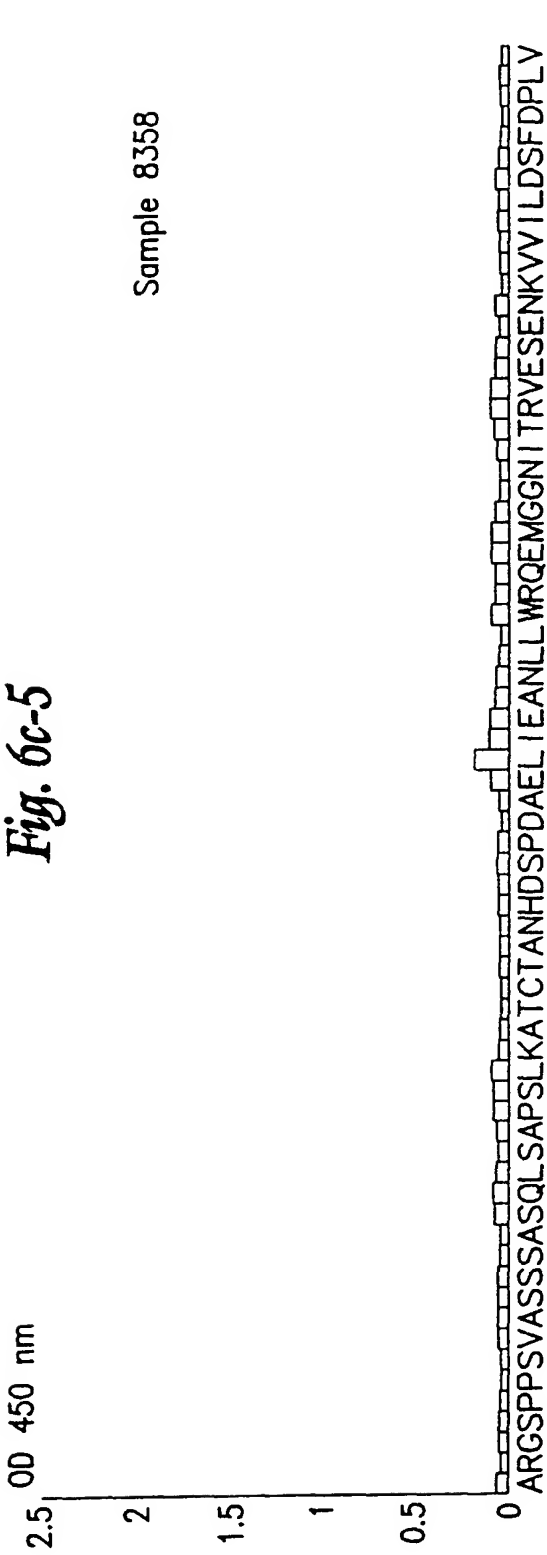


Fig. 6c-5

Sample 8358



Sample 8358 (continued)

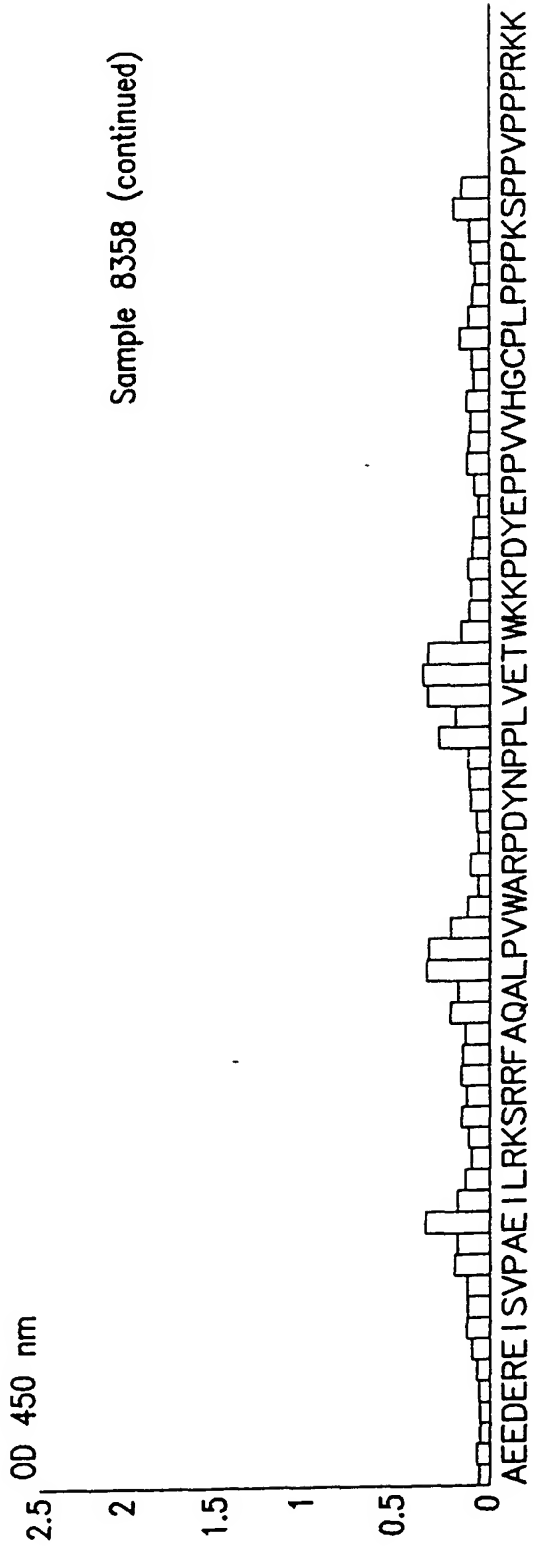


Fig. 6c-6

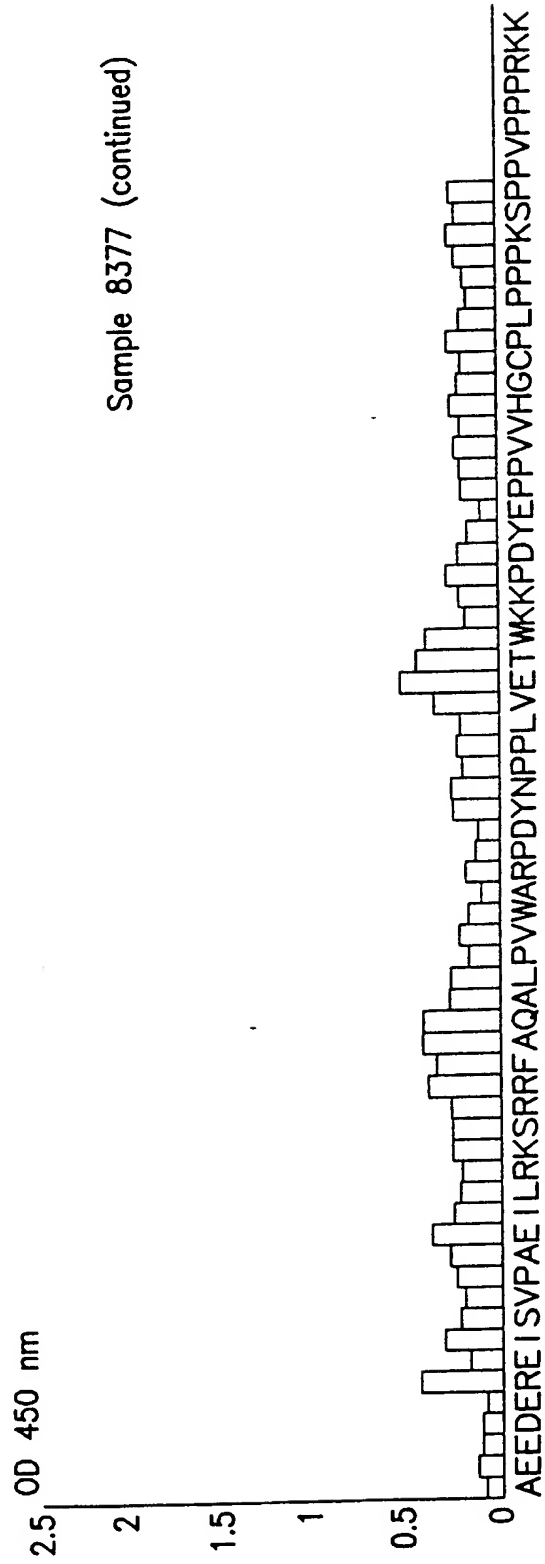
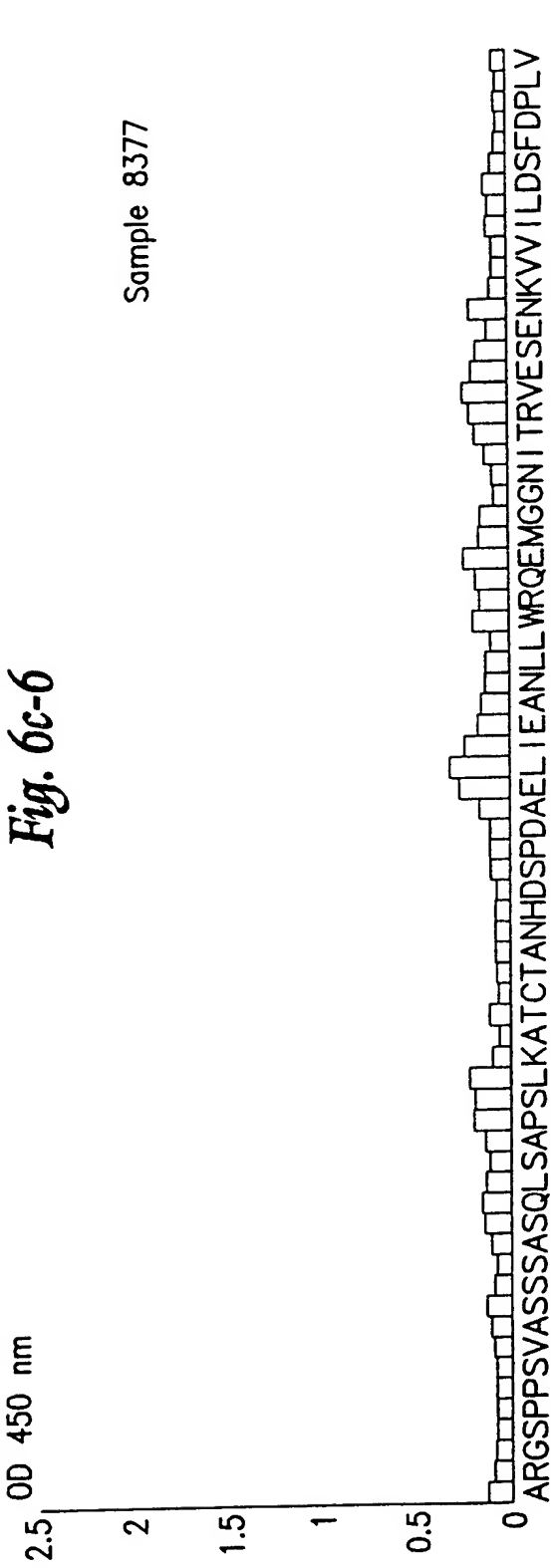
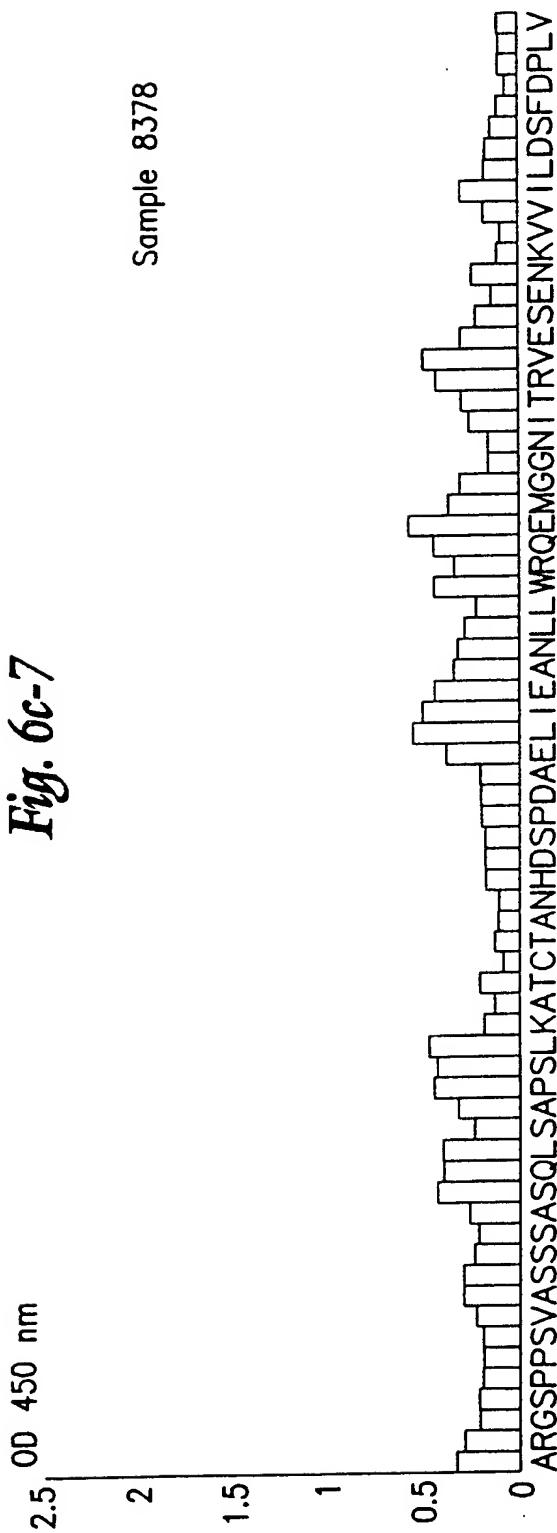


Fig. 6c-7

Sample 8378



Sample 8378 (continued)

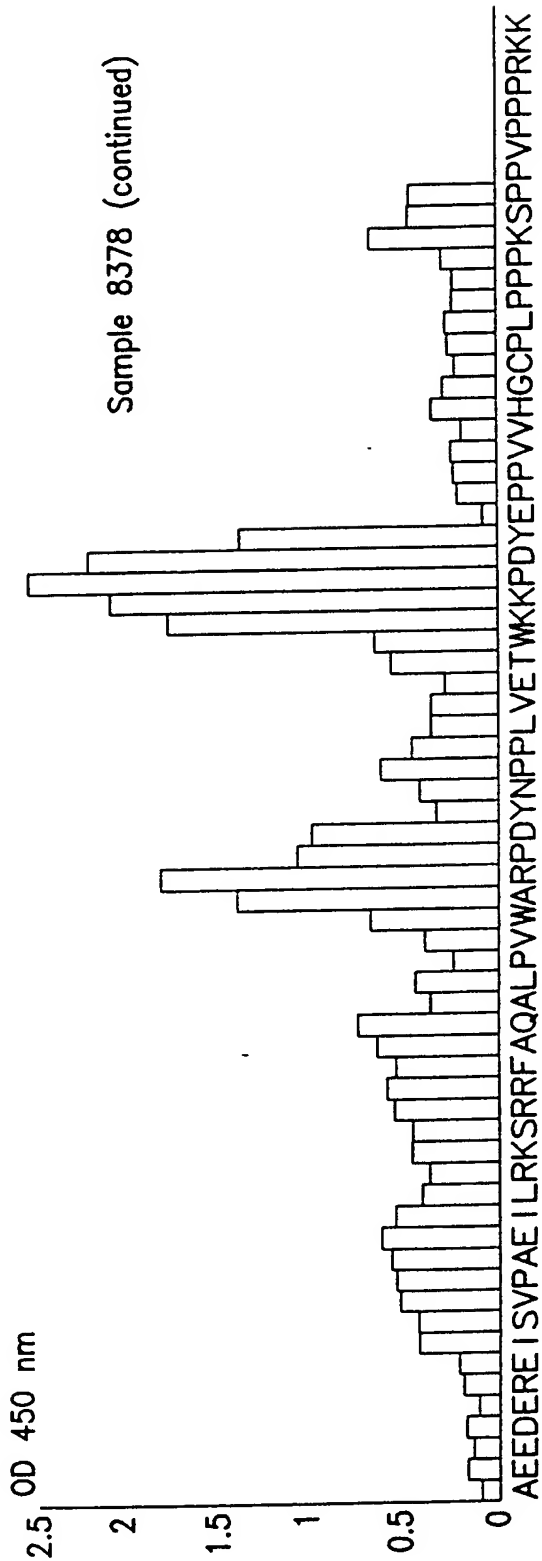
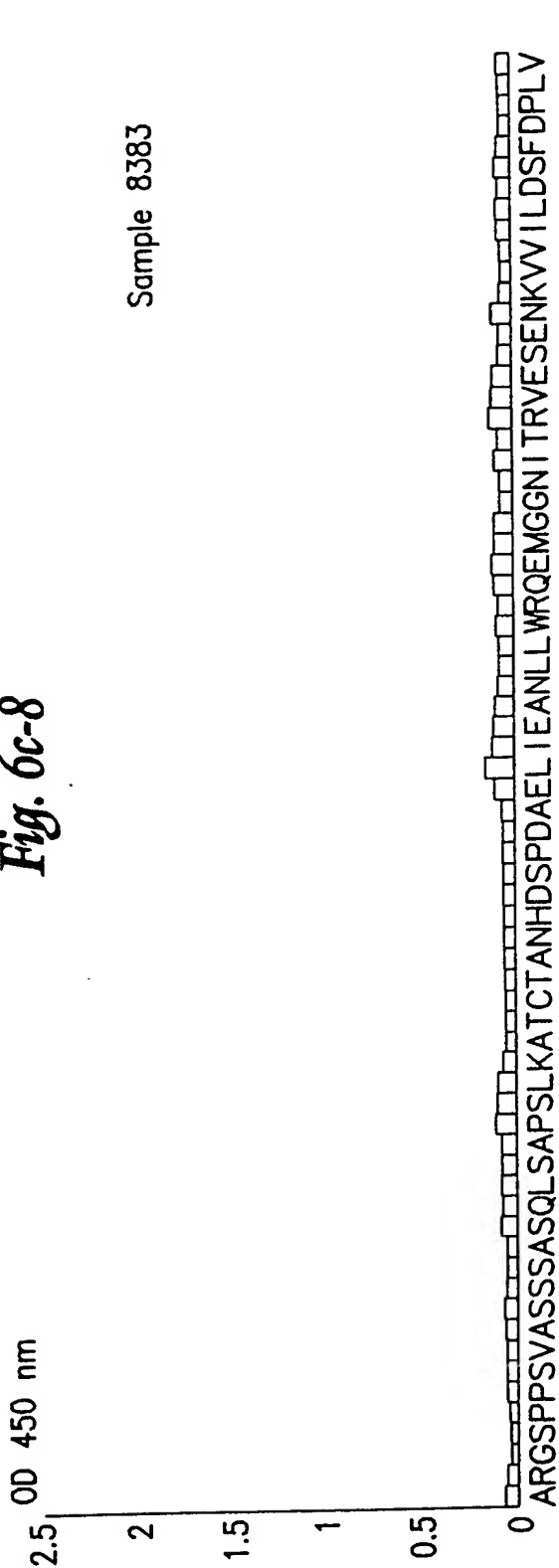


Fig. 6c-8

Sample 8383



Sample 8383 (continued)

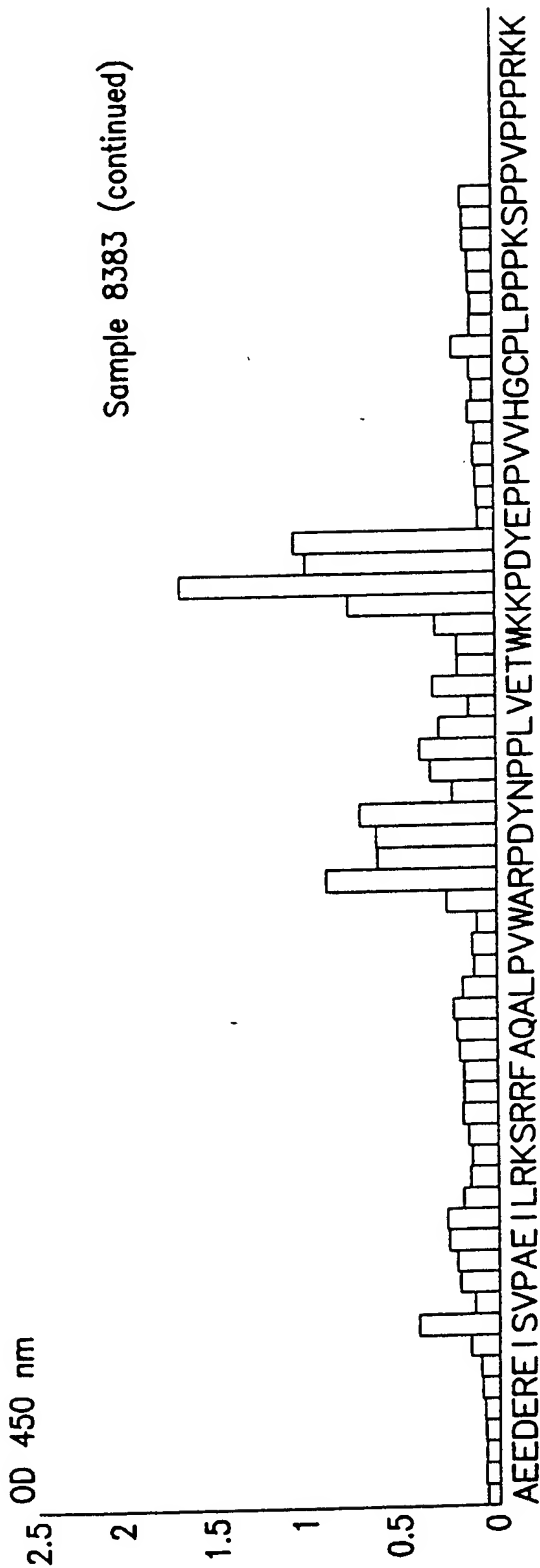
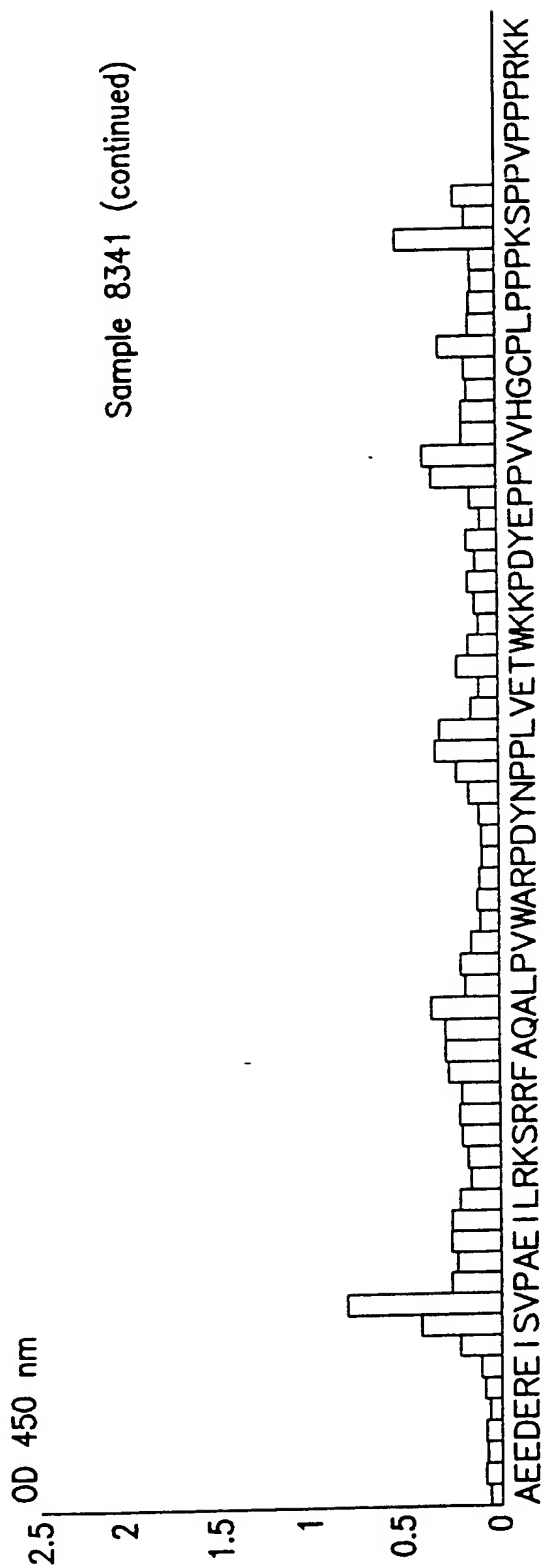
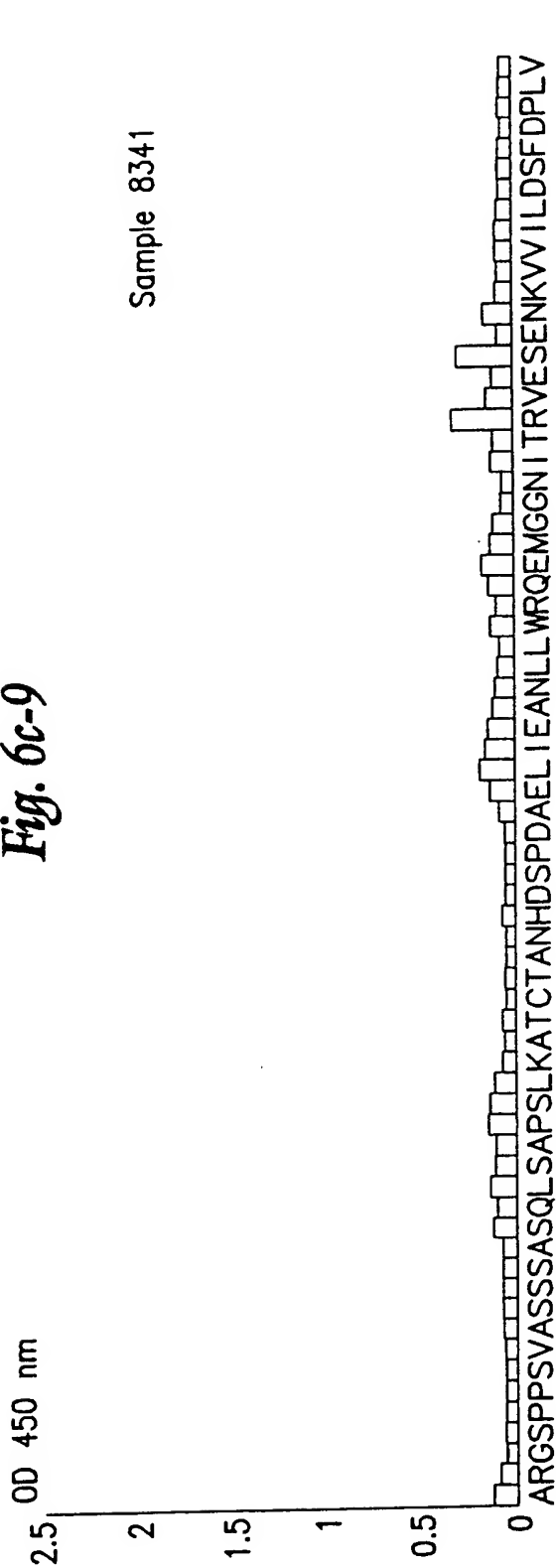
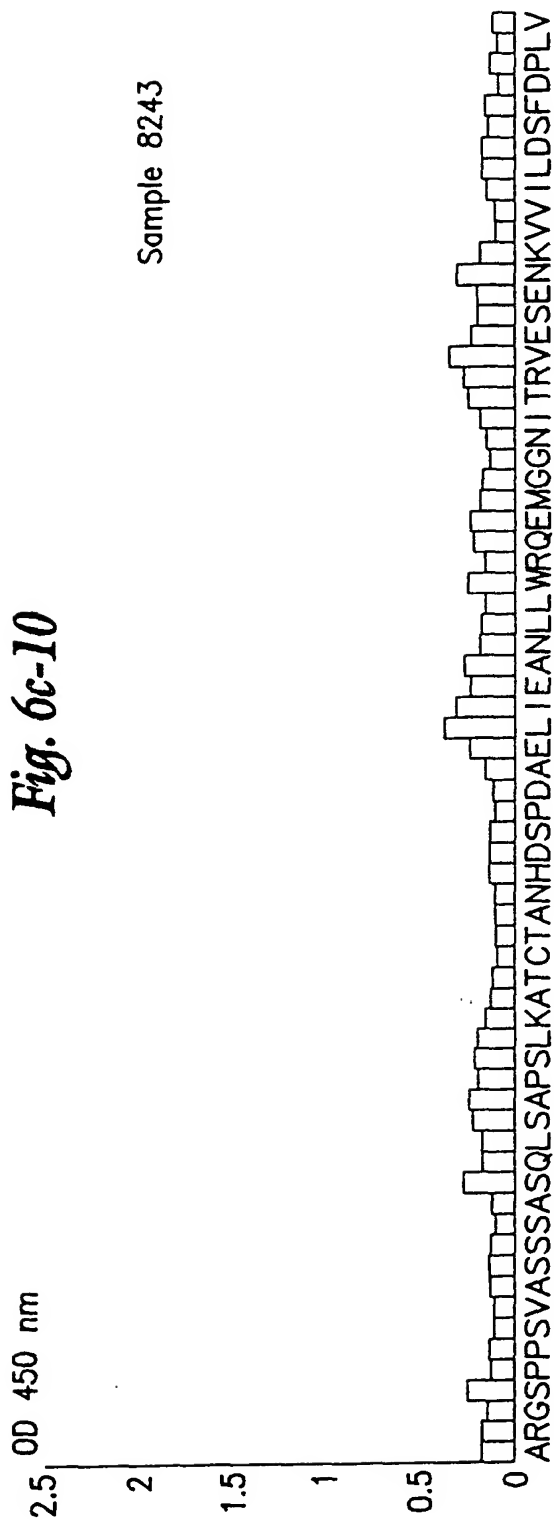


Fig. 6c-9

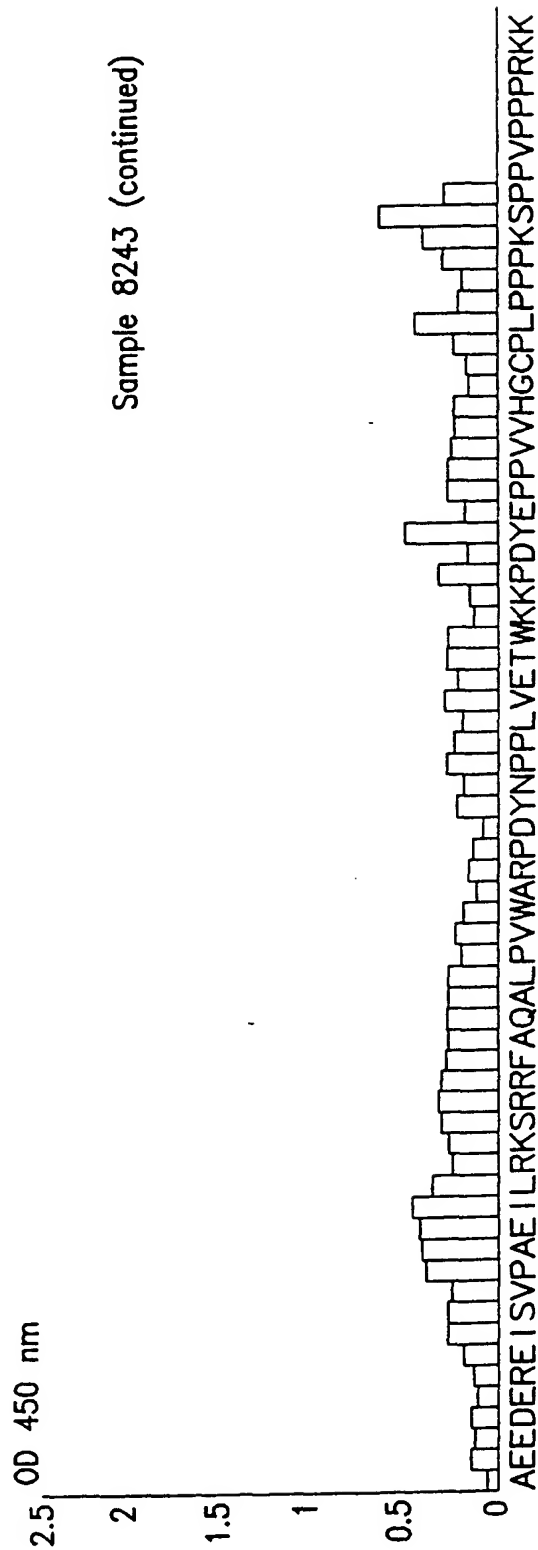


*Fig. 6c-10*

Sample 8243



Sample 8243 (continued)



*Fig. 7a-1*

Peptide I MSTIPKPQRKTKRNTNRRPQ (SEQ ID NO:453)  
 Peptide II PQRKTKRNTNRRPQDVKFPG (SEQ ID NO:454)  
 Peptide III RNTNRRPQDVKFPGGGQIVG (SEQ ID NO:455)

Peptide I	Peptide II	Peptide III
(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)
(178) MSTIPKPQR	(184) PQRKTKRNT	(190) RNTNRRPQD
(179) STIPKPQRK	(185) QRKTKRNTN	(191) NTNRRRPQDV
(180) TIPKPQRKT	(186) RKTGRNTNR	(192) TNRRPQDVK
(181) IPKPQRKTK	(187) KTKRNTNRR	(193) NRRPQDVKF
(182) PKPQRKTKR	(188) TKRNTNRRP	(194) RRPQDVKF
(183) KPQRKTKRN	(189) KRNTNRRPQ	(195) RPQDVKFPG
(184) PQRKTKRNT	(190) RNTNRRPQD	(196) PQDVKFPGG
(185) QRKTKRNTN	(191) NTNRRPQDV	(197) QDVKFPGGG
(186) RKTGRNTNR	(192) TNRRPQDVK	(198) DVKFPGGGQ
(187) KTKRNTNRR	(193) NRRPQDVKF	(199) VKFPGGGQI
(188) TKRNTNRRP	(194) RRPQDVKF	(200) KFPGGGGQIV
(189) KRNTNRRPQ	(195) RPQDVKFPG	(201) FPGGGQIVG

Fig. 7a-2

Core 5 PGGQIVGGVYLLPRRGPRLL (SEQ ID NO:456)  
 Peptide IV LPRRGPRLLGVRATRKTSERS (SEQ ID NO:457)  
 Peptide V (SEQ ID NO:458) TRKTSERSQPRGRRQPIPKV  
 Peptide VI (SEQ ID NO:459) RRQIPKVRREGRRTWAQPG

Inventor: DE LEYS, Robert  
 SN Div of SN 09/576,824/Sheet  
 35 of 57  
 Attv. Dkt.: 2551-124

Core 5	Peptide IV	Peptide V	Peptides VI
(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)
(202) PGGQIVGG	(214) LPRRGPRLLG	(238) TRKTSERSQ	(238) RRQIPKVR
(203) GGGQIVGGV	(215) PRRGPRLGV	(239) RKTSESRQ	(239) RQIPKVR
(204) GGQIVGGVY	(216) RRGPRLLGVR	(240) KTSERSQPR	(240) QIPKVR
(205) GQIVGGVYL	(217) RGPRLGVRA	(241) TSERSQPRG	(241) PIPKVR
(206) QIVGGVYLL	(218) GPRLGVRAT	(242) SERSQPRGR	(242) IPKVR
(207) IVGGVYLLP	(219) PRLGVRATR	(243) ERSQPRGR	(243) PKVR
(208) VGGVYLLPR	(220) RLGVRATRK	(244) RSQPRGRRQ	(244) KVR
(209) GGVYLLPRR	(221) LGVRATRK	(245) SQPRGRRQ	(245) VRR
(210) GYLLPRRG	(222) GVRATRKTS	(246) QPRGRRQPI	(246) RR
(211) VYLLPRRG	(223) VRATRKTS	(247) PRGRRQPI	(247) R
(212) YLLPRRGPR	(224) RATRKTS	(248) RGRRQPIPK	(248) PEGRTWAQ
(213) LLPRRGPR	(225) ATRKTS	(249) GRRQPIPKV	(249) EGRTWAQPG

*Fig. 7a-3*

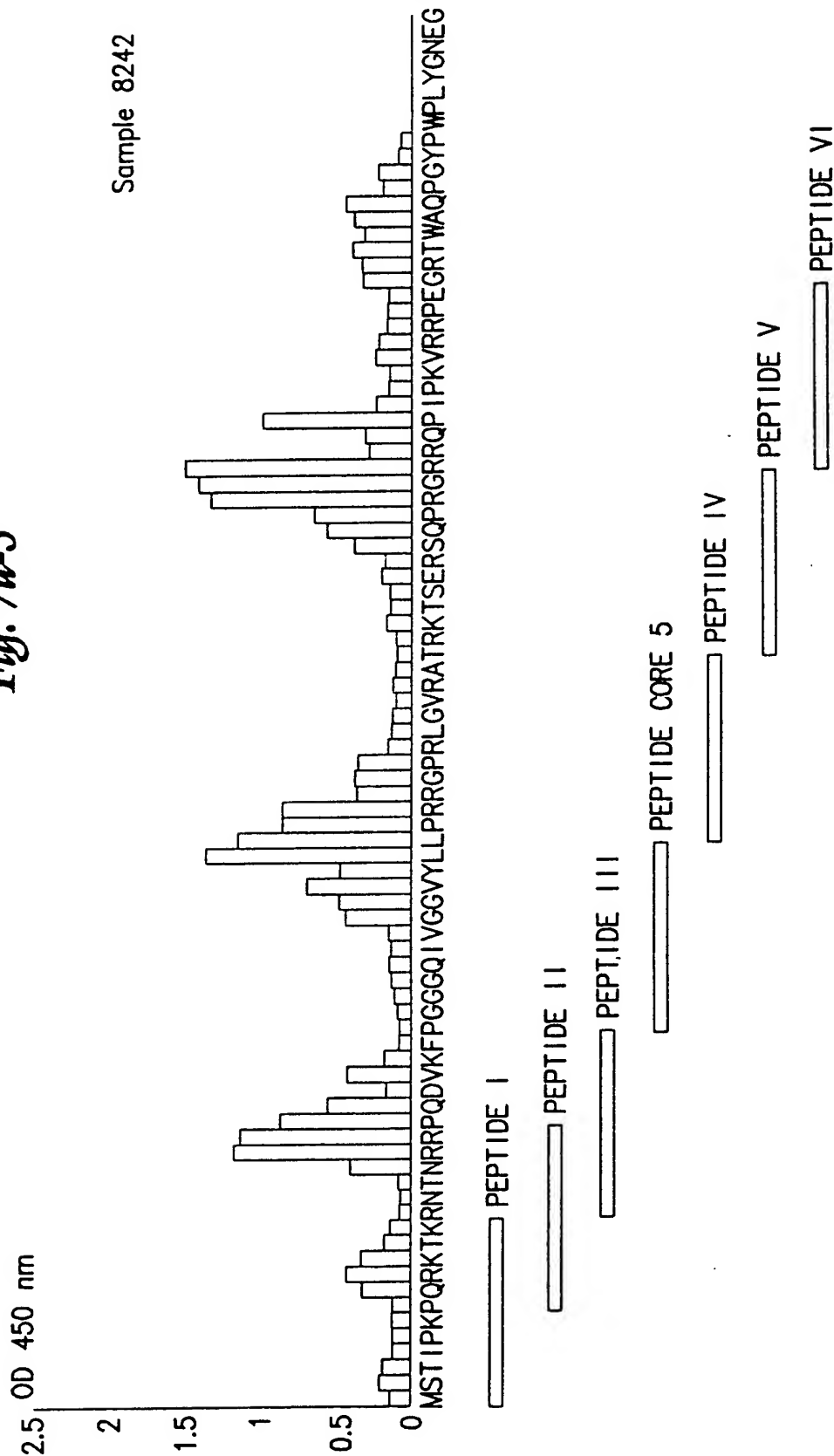


Fig. 7b-1

HCV1	LSGKPAIIPDREVLREFDE	(SEQ ID NO:460)			
HCV2	IIPDREVLREFDEMEECSEQ	(SEQ ID NO:460)			
HCV3	VLYREFDEMEECSEQHLPYIE	(SEQ ID NO:462)			
HCV4	DEMEECSEQHLPYIEQGMMLA	(SEQ ID NO:463)			
HCV5	SQHLPYIEQGMMLAEQFKQK	(SEQ ID NO:464)			
HCV6	IEQGMMLAEQFKQKALGLLQ	(SEQ ID NO:465)			

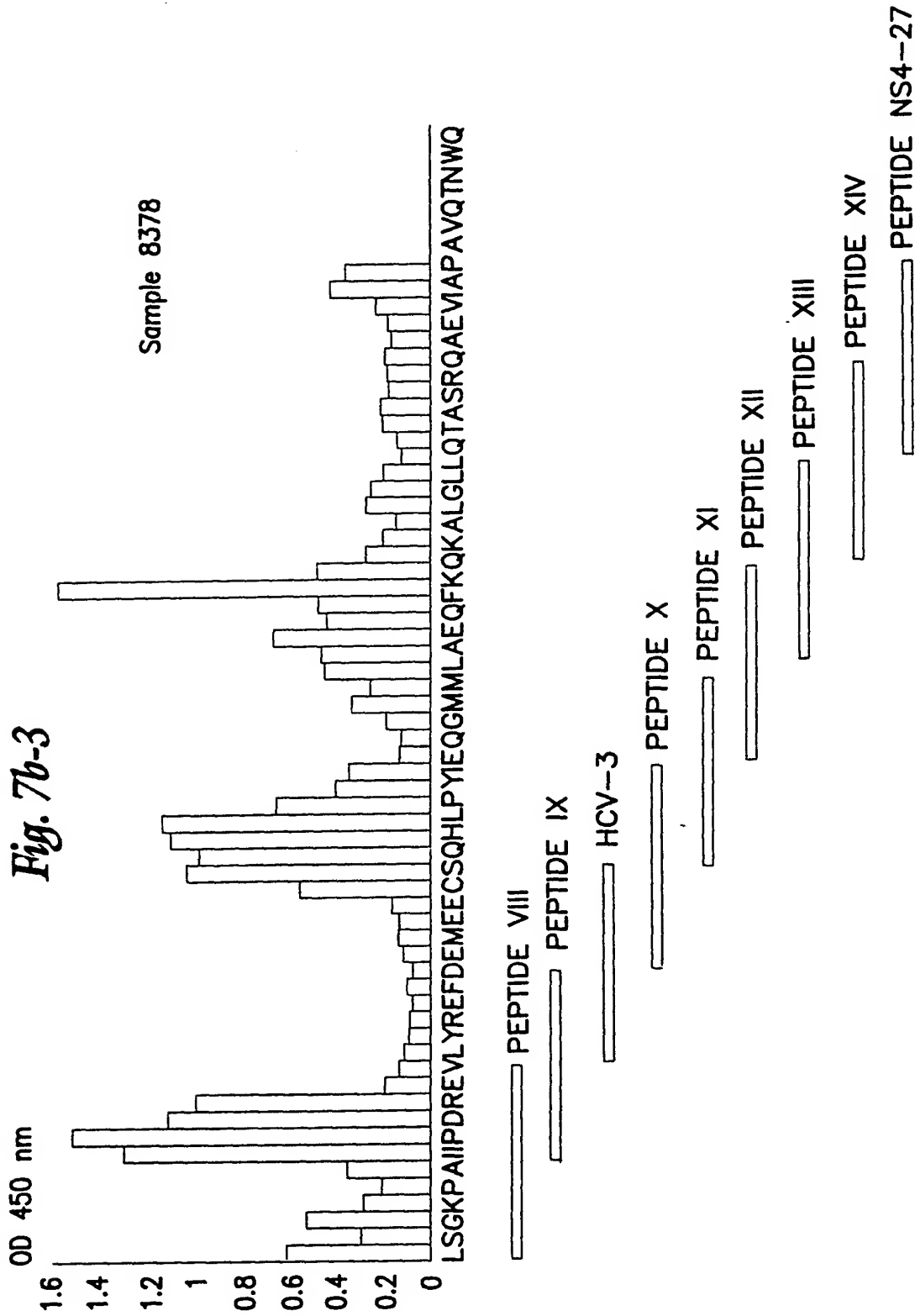
  

<u>HCV1</u>	<u>HCV2</u>	<u>HCV3</u>	<u>HCV4</u>	<u>HCV5</u>	<u>HCV6</u>
(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)
(258) LSGKPAIIP	(264) IIPDREVL	(270) VLYREFDEM	(276) DEMEECSQH	(282) SQHLPYIEQ	(288) IEQGMMLAE
(259) SGKPAIIPD	(265) IIPDREVL	(271) LYREFDEME	(277) EMEECSEQH	(283) QHLPYIEQG	(289) EQGMMLAEQ
(260) GKPAIIPDR	(266) PDREVL	(272) YREFDEME	(278) MEECSQHLP	(284) HLPYIEQGM	(290) QGMMLAEQF
(261) KPAIIPDRE	(267) DREVL	(273) REFFDEME	(279) EECSEQHLP	(285) LPYIEQGM	(291) GMMLAEQFK
(262) PAIIPDREV	(268) REVLYREF	(274) EFFEDEMEE	(280) ECSQHLPYI	(286) PYIEQGMML	(292) MMLAEQFKQ
(263) AIIPDREV	(269) EVLYREFDE	(275) FDEMEECSEQ	(281) CSQHLPYIE	(287) YIEQGMMLA	(293) MLAEQFKQK
(264) IIPDREV	(270) VLYREFDEM	(276) DEMEECSQH	(282) SQHLPYIEQ	(288) IEQGMMLAE	(294) LAEQFKQKA
(265) IPDREV	(271) LYREFDEME	(277) EMEECSEQH	(283) QHLPYIEQG	(289) EQGMMLAEQ	(295) AEQFKQKAL
(266) PDREV	(272) YREFDEME	(278) MEECSQHLP	(284) HLPYIEQGM	(290) QGMMLAEQF	(296) EQFKQKALG
(267) DREV	(273) REFDEME	(279) EECSEQHLP	(285) LPYIEQGM	(291) GMMLAEQFK	(297) QFKQKALGL
(268) REVLYREF	(274) EFFEDEMEE	(280) ECSQHLPYI	(286) PYIEQGMML	(292) MMLAEQFKQ	(298) FKQKALGLL
(269) EVLYREF	(275) FDEMEECSEQ	(281) CSQHLPYIE	(287) YIEQGMMLA	(293) MLAEQFKQK	(299) KQKALGLLQ

Fig. 7b-2

HCV7 LAEQFKQKALGLLQTASRQA (SEQ ID NO:466)  
HCV8 QKALGLLQTASRQAEVIAPA (SEQ ID NO:467)  
HCV9 LQTASRQAEVIAPAVQTNWQ (SEQ ID NO:468)

	<u>HCV7</u>	<u>HCV8</u>	<u>HCV9</u>
(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)
(294)	LAEQFKQKA (300)	QKALGLLQT (306)	LQTASRQAE
(295)	AEQFKQKAL (301)	KALGLLQTA (307)	QTASRQAEV
(296)	EQFKQKALG (302)	ALGLLQTAS (308)	TASRQAEVI
(297)	QFKQKALGL (303)	LGLLQTASR (309)	ASRQAEVIA
(298)	FKQKALGLL (304)	GLLQTASRQ (310)	SRQAEVIAP
(299)	KQKALGLLQ (305)	LLQTASRQA (311)	RQAEVIAPA
(300)	QKALGLLQT (306)	LQTASRQAE (312)	QAEVIAPAV
(301)	KALGLLQTA (307)	QTASRQAEV (313)	AEVIAPAVQ
(302)	ALGLLQTAS (308)	TASRQAEVI (314)	EVIAPAVQT
(303)	LGLLQTASR (309)	ASRQAEVIA (315)	VIAPAVQTN
(304)	GLLQTASRQ (310)	SRQAEVIAP (316)	IAPAVQTNW
(305)	LLQTASRQA (311)	RQAEVIAPA (317)	APAVQTNWQ



# Fig. 7c-1

NS5-21 GNITRYESENKVVILDSFDP (SEQ ID NO:469)  
 NS5-23 VILDSFDPLVAEEEDEREISV (SEQ ID NO:470)  
 NS5-25 EDEREISVPAEILRKSRFA (SEQ ID NO:471)  
 NS5-27 (SEQ ID NO:472) LRKSRFAQALPVWARPDYN  
 NS5-29 (SEQ ID NO:473) VWARPDYNPPLVETWKKPDY

	<u>NS5-21</u>	<u>NS5-23</u>	<u>NS5-25</u>	<u>NS5-27</u>	<u>NS5-29</u>
SEQ ID NO:	SEQ ID NO:	SEQ ID NO:	SEQ ID NO:	SEQ ID NO:	SEQ ID NO:
318	GNITRYESE 330	VILDSFDPL 342	EDEREISVP 354	LRKSRRFAQ 366	VWARPDYNP
319	NITRYESEN 331	ILDSFDPLV 343	DEREISVPA 355	RKSRRFAQA 367	WARPDYNPP
320	ITRYESENK 332	LDSFDPLVA 344	EREISVPAE 356	KSRRFAQAL 368	ARPDYNPPL
321	TRYESENKV 333	DSFDPLVAE 345	REISVPAEI 357	SRRFAQALP 369	RPDYNPPLV
322	RYESENKVV 334	SFDPLVAEE 346	EISVPAEIL 358	RRFAQALPV 370	PDYNPPLVE
323	YESENKVI 335	FDPLVAEED 347	ISVPAEILR 359	RFAQALPVW 371	DYNPPLVET
324	ESENKVVIL 336	DPLVAEED 348	SVPAEILRK 360	FAQALPVA 372	YNPPLVETW
325	SENKVVILD 337	PLVAEEDER 349	VP AEILRKS 361	AQALPVWAR 373	NPPLVETWK
326	ENKVVILDS 338	LVAEEDERE 350	PAEILRKSR 362	QALPVWARP 374	PPLVETWKK
327	NKVVILDSF 339	VAEEDEREI 351	AEILRKSR 363	ALPVWARPD 375	PLVETWKKP
328	KVVILDSFD 340	AEEDEREIS 352	EILRKSRF 364	LPVWARPDY 376	LVETWKKPD
329	VVILDSFDP 341	EEDEREISV 353	ILRKSRFA 365	PVWARPDYN 377	VETWKKPDY

Fig. 7c-2

NS5-31 ETWKKPDYEPV VHGCP LPP (SEQ ID NO:474)  
 NS5-33 (SEQ ID NO:475) VHGCP LPPPKSPVP PPRKK

<u>NS5-31</u>		<u>NS5-33</u>	
(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)	(SEQ ID NO:)
378 ETWKKPDYE	390 VHGCP LPPK		
379 TWKKPDYEP	391 HGCPLPPKS		
380 WKKPDYEP	392 GCPLPPKSP		
381 KKPDYEPV	393 CPLPPKSP		
382 KPDYEPV	394 PLPPKSPV		
383 PDYEPV	395 LPPKSPV		
384 DYEPV	396 PPKSPVP		
385 YEPV	397 PPKSPVP		
386 EPV	398 PPKSPVP		
387 PPV	399 KSPVP		
388 PV	400 SPVP		
389 VV	401 PPVP		

Fig. 7c-3

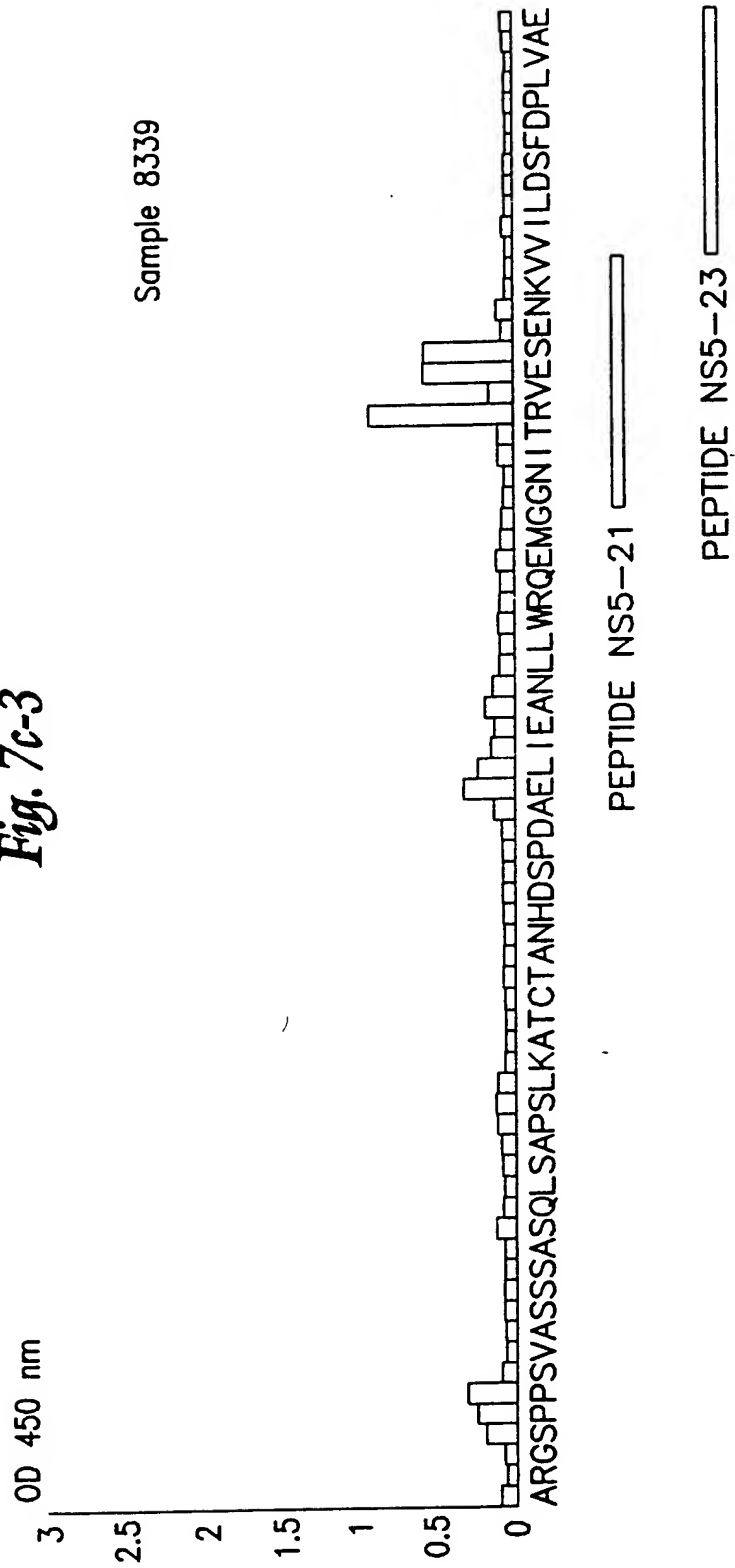


Fig. 7c-4

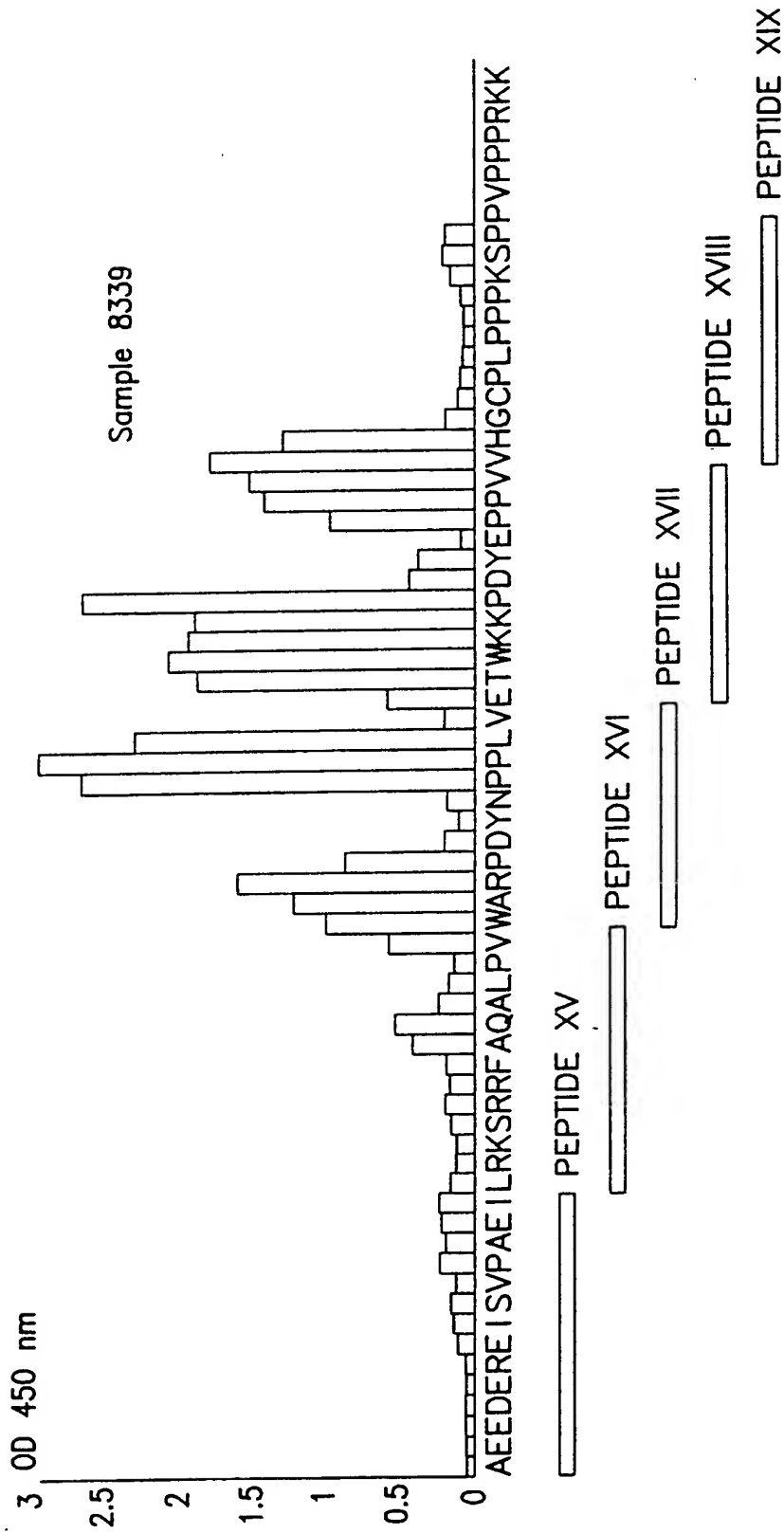
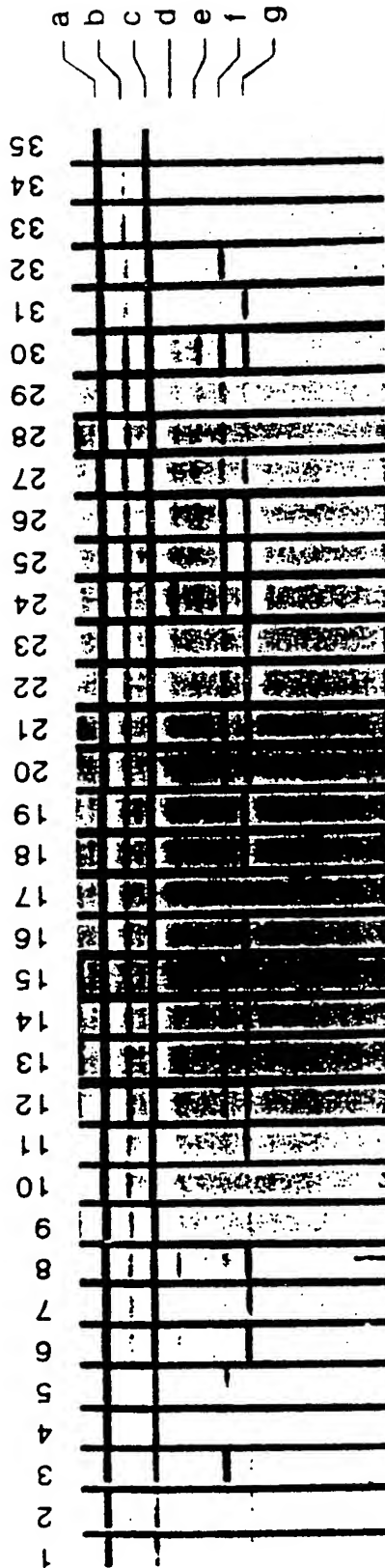
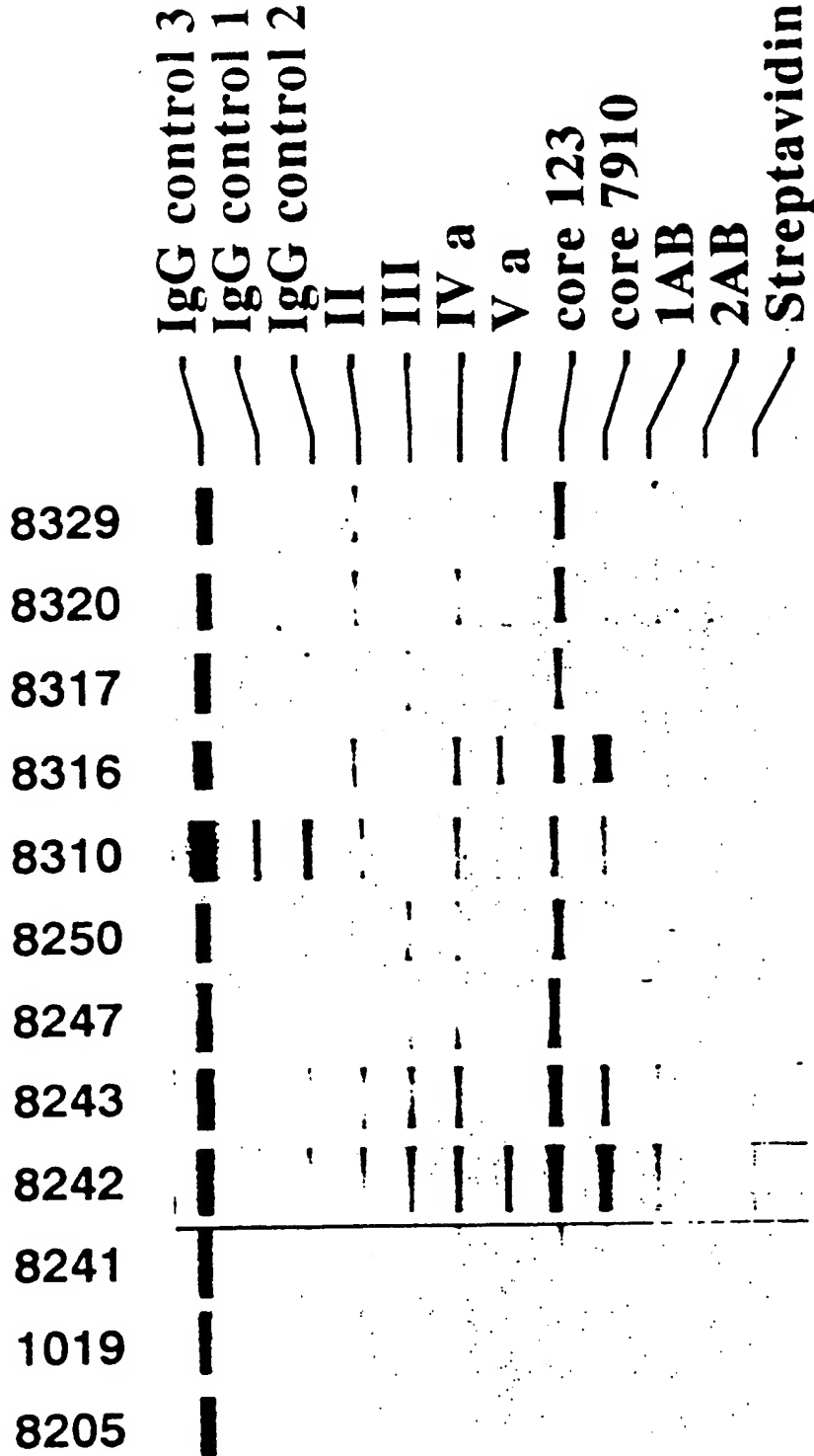


Fig. 8

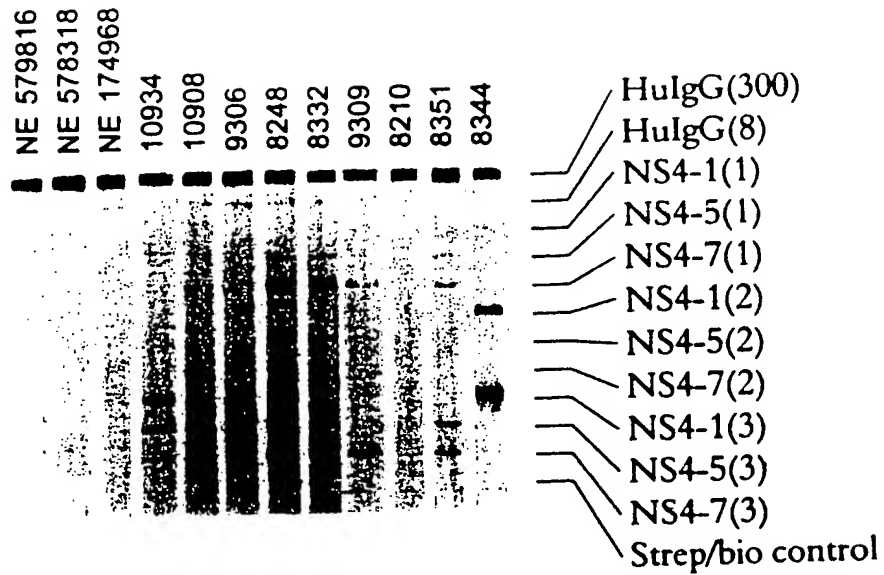


- a: High intensity control
- b: Low intensity control
- c: Medium intensity control
- d: Peptide XXg-1, unbiotinylated
- e: Peptide XXg-2, unbiotinylated
- f: Biotinylated peptide XXg-1: streptavidin complex
- g: Biotinylated peptide XXg-2: streptavidin complex

Fig. 6



*Fig. 10*



*Fig. 11*

Peptide	Sequence
NS4-a	GALVAFKIMSGEVPSTEDLV (SEQ ID NO:445)
NS4-b	VPSTEDLVNLLPAILSPGAL (SEQ ID NO:446)
NS4-c	AILSPGALVVGVCAAILRR (SEQ ID NO:447)
NS4-d	VCAAILRRHVGPGEAVQWM (SEQ ID NO:448)
NS4-e	GEGAVQWMNRLIAFASRGNH (SEQ ID NO:449)

Fig. 12

(SEQ ID NO:)		Amino Acid Sequence		
Epi-152 (450)	Bio- G G - I P D R E V L Y R G G K K P D Y E P P V G G R R P Q D V K F P	NS4 epitope 1	NS5 epitope 5	Core epitope 2
Epi-33B3A (451)	Bio- G G - W A R P D Y N P P G G Q F K Q K A L G L G S G V Y L L P R R G	NS5 epitope 3	NS4 epitope 3B	Core epitope 3A
Epi-4B2A6 (452)	Bio- G G - R G R R Q P I P K G G S Q H L P Y I E Q S G P V V H G C P L P	Core epitope 4B	NS4 epitope 2A	NS5 epitope 6

Fig. 13

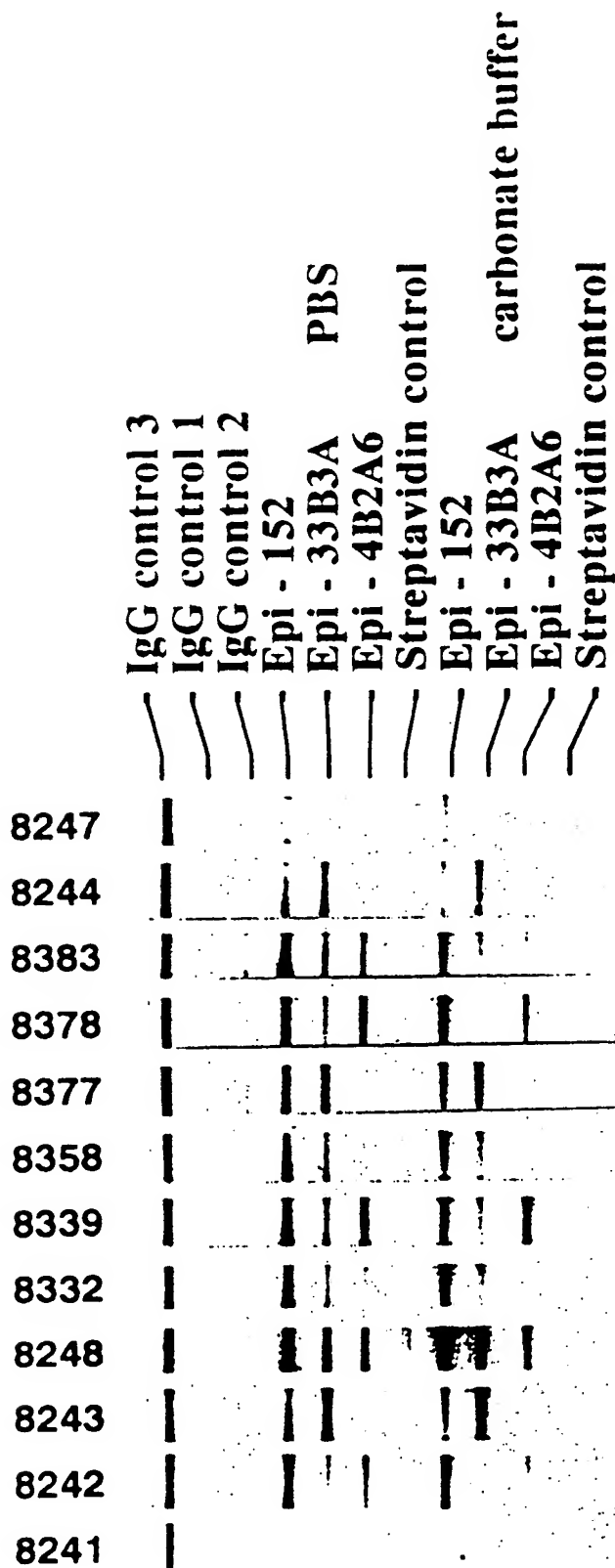


Fig. 14a

[illegible]

*Fig. 146*

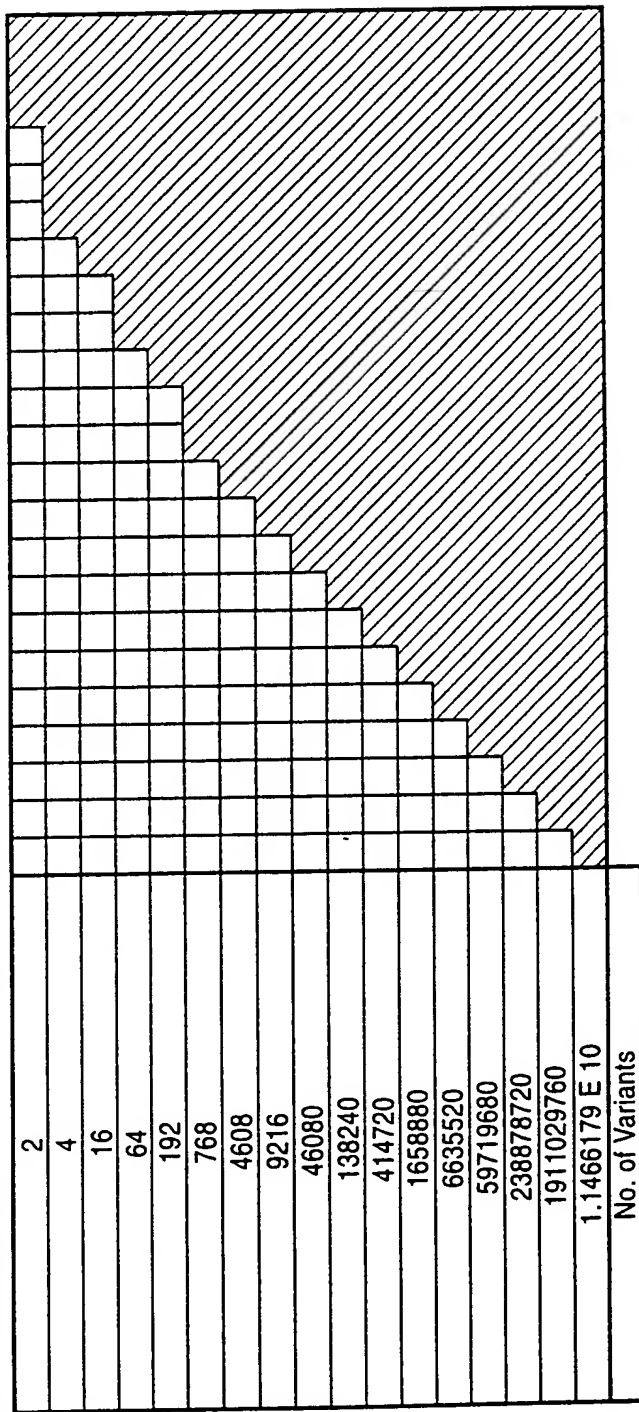
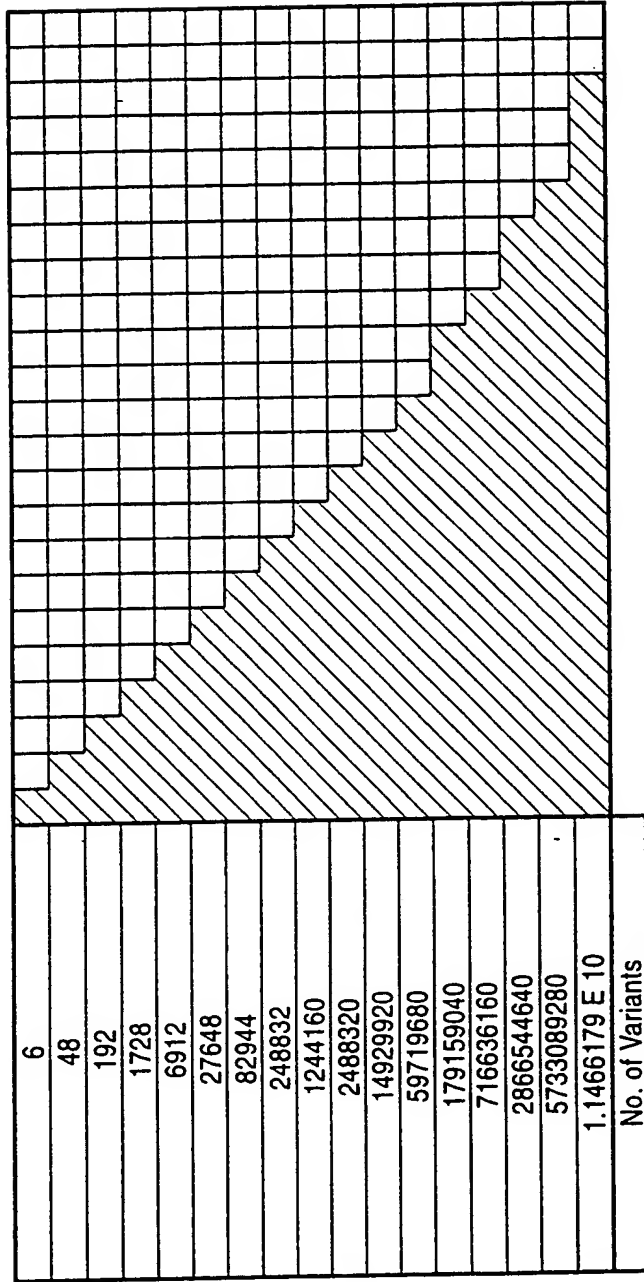
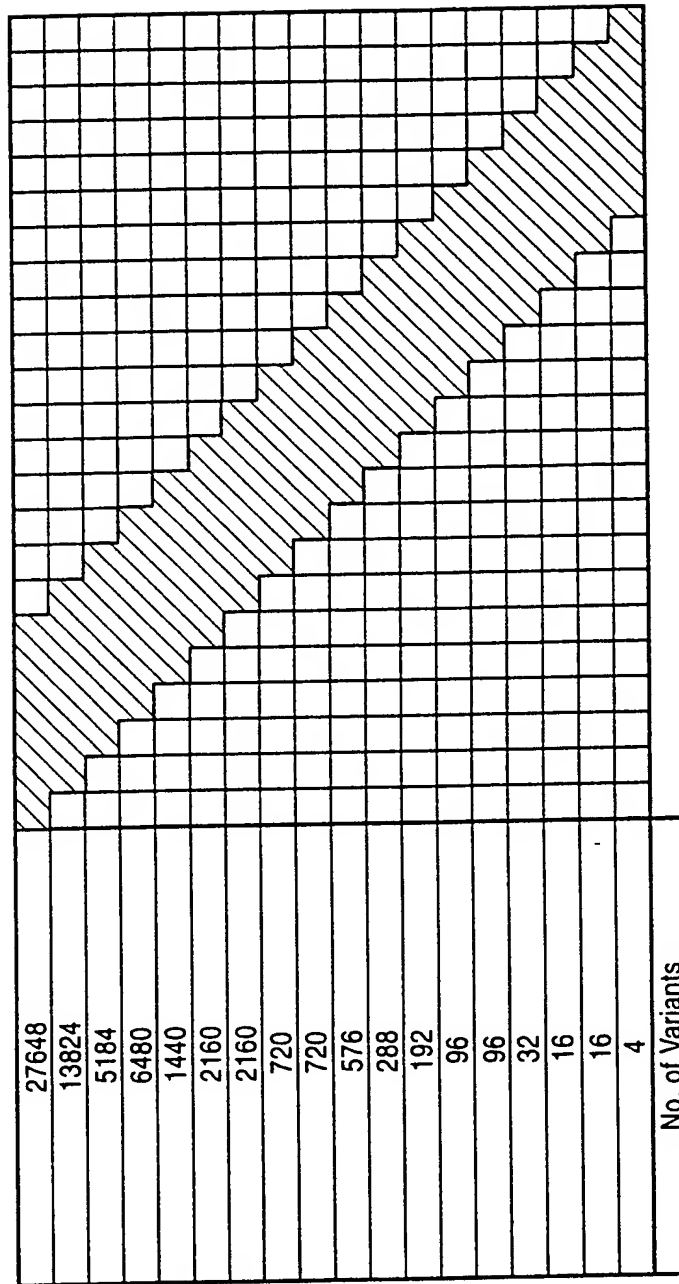


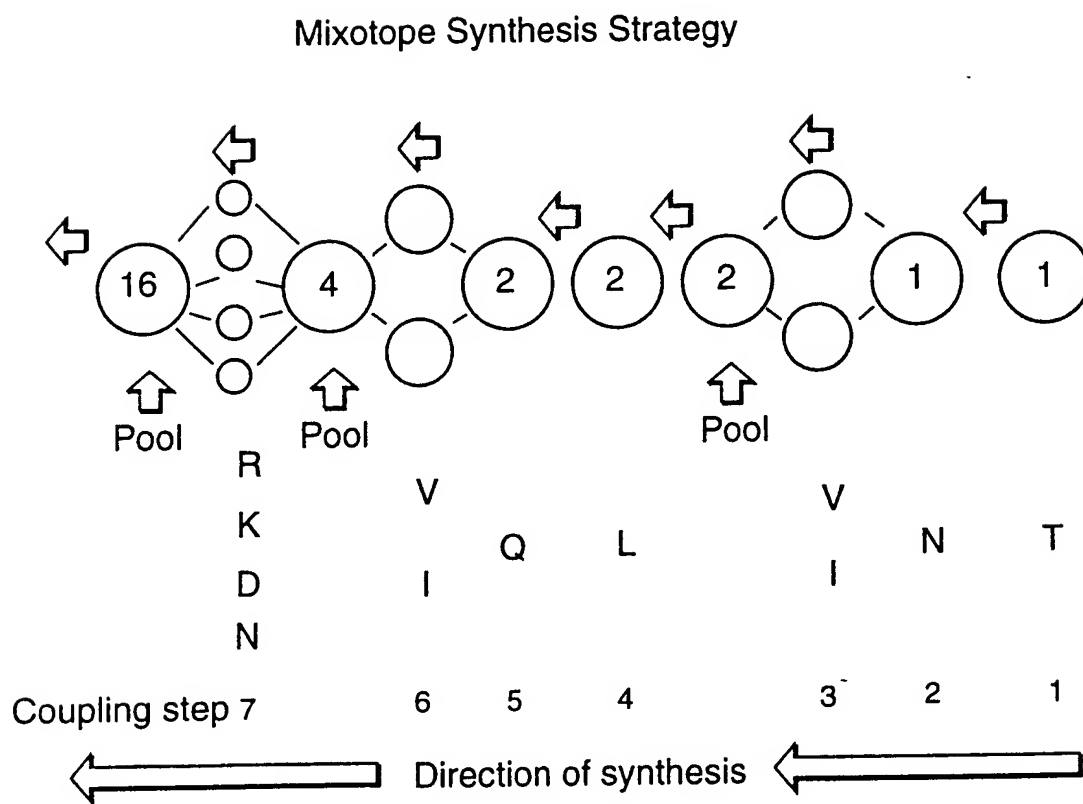
Fig. 14c



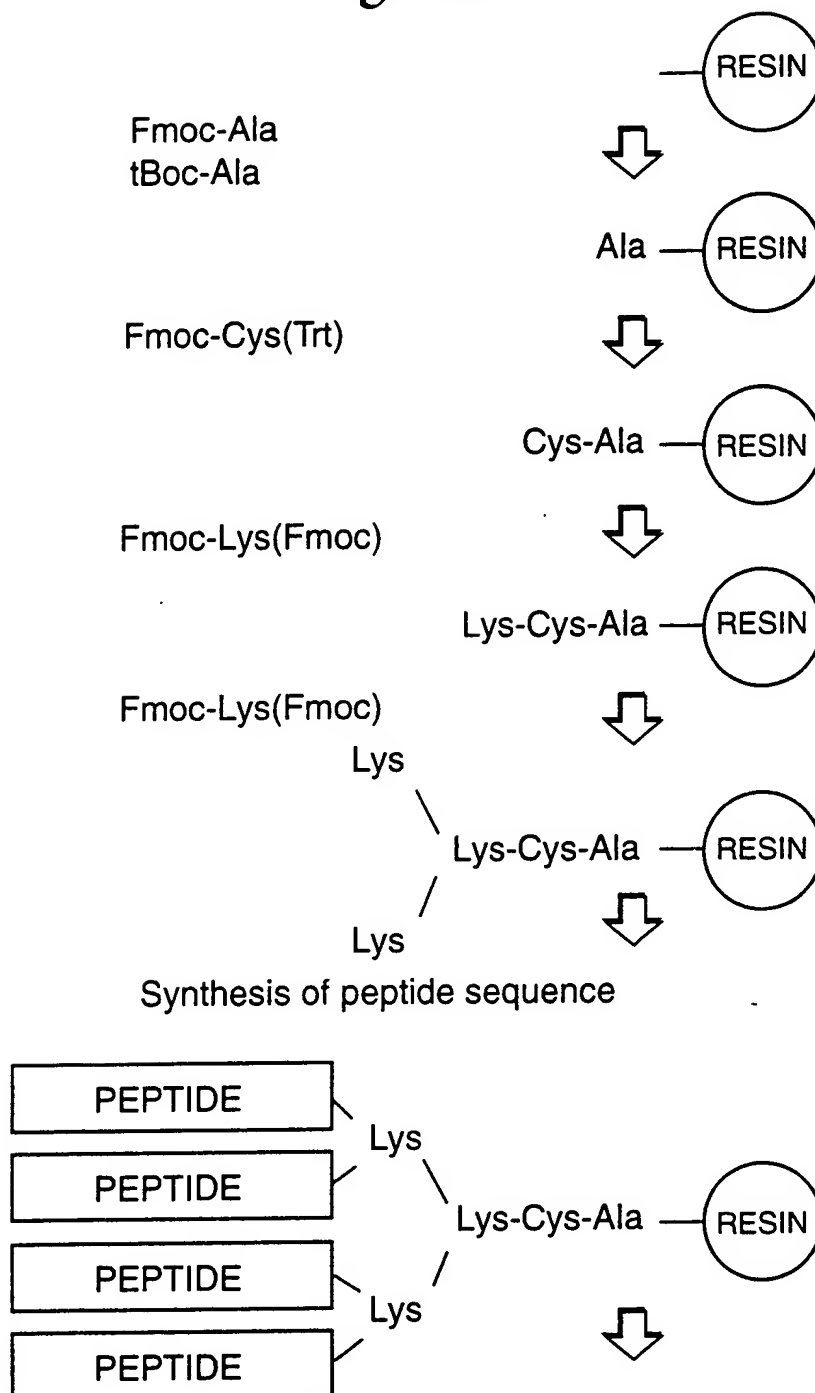
*Fig. 14d*



*Fig. 15*

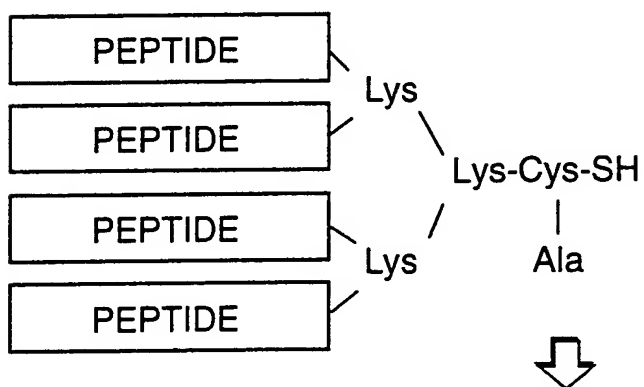


*Fig. 16A*

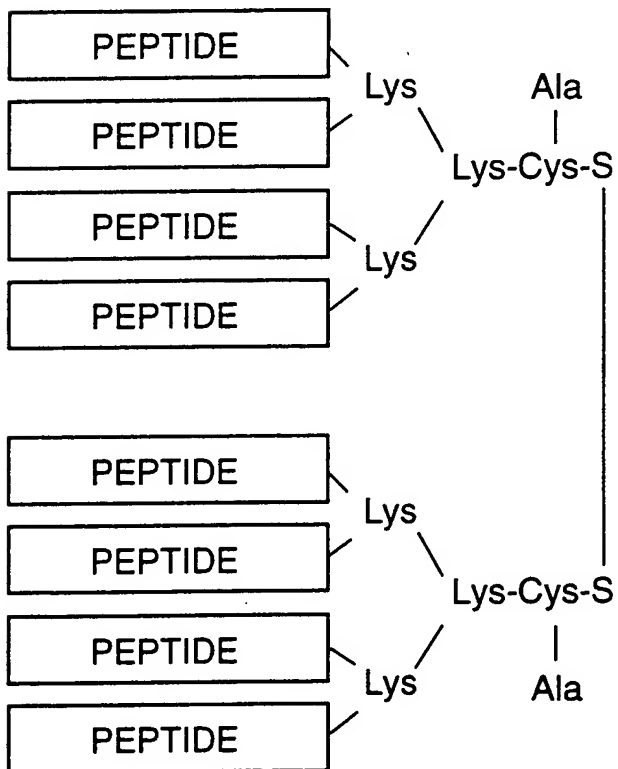


*Fig. 16B*

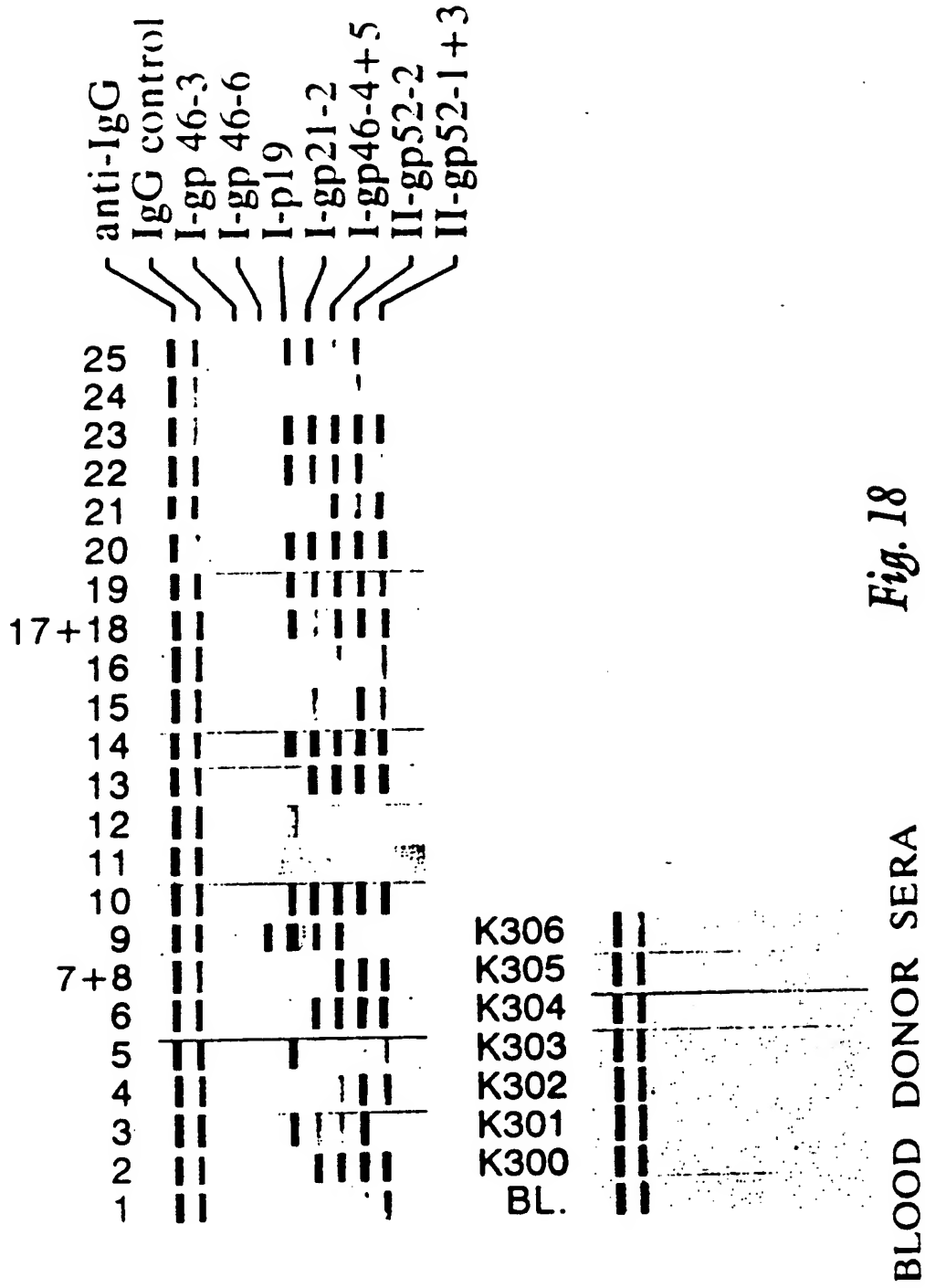
Cleavage and side-chain deprotection



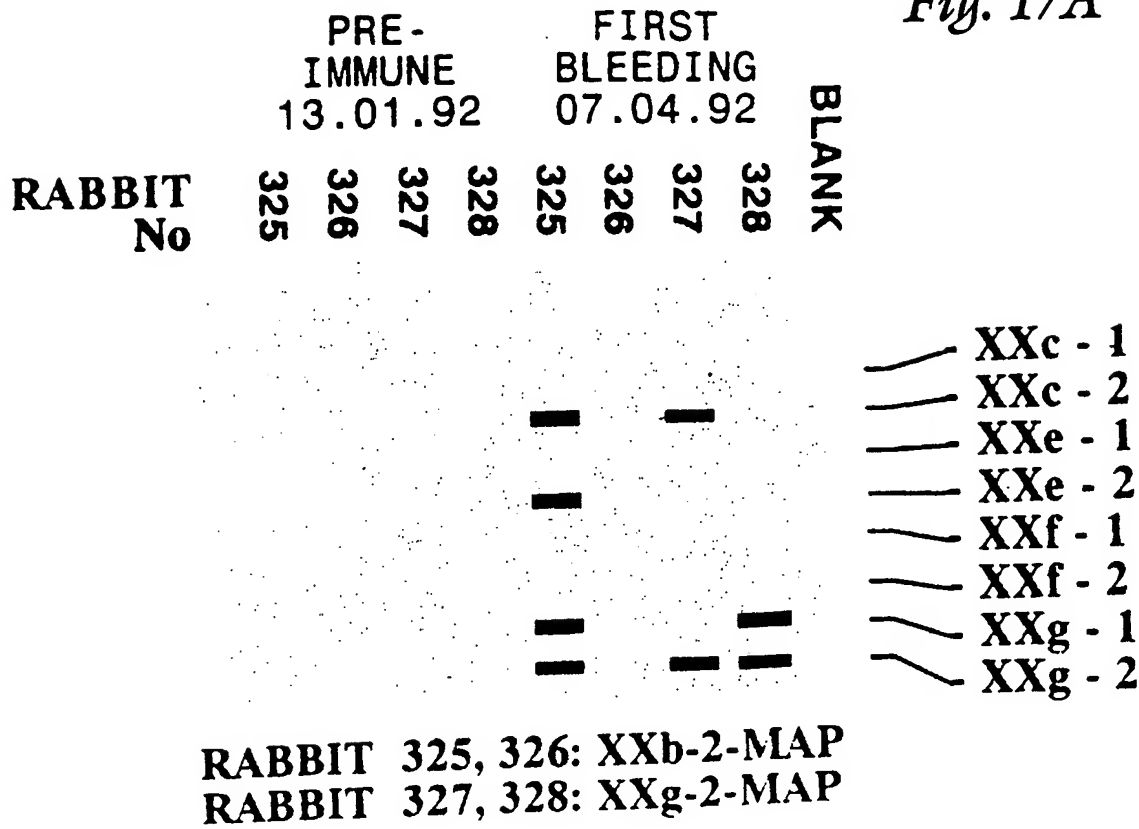
Oxidation and dimerization



BBI ANTI-HTLV I/II MIXED TITER PERFORMANCE PANEL PRP302



*Fig. 17A*



*Fig. 17B*

